ARMY AL&T

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Army Logistics Sustainment
The Leap Ahead

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Also In This Issue:
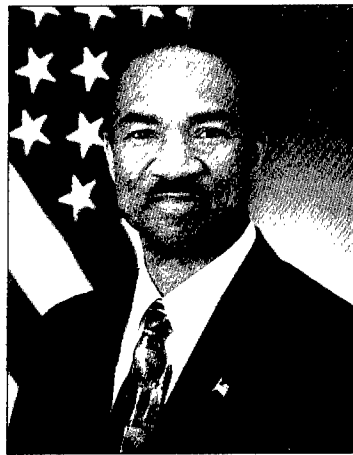## The 2002 Army Acquisition Workshop

FROM THE ARMY ACQUISITION EXECUTIVE

Acquisition, Logistics, And Technology: Facing The Future Together

When my staff and I sat down to plan the 2002 Army Acquisition Workshop, which was held this past August in Norfolk, VA, I noticed that the draft agenda was focused primarily on acquisition. "Where's logistics? Where's technology?" I asked. We then revised the agenda to reflect the total responsibilities of the Office of the Assistant Secretary of the Army for Acquisition, Logistics and Technology. Wimpy D. Pybus, our Deputy for Integrated Logistics Support, was added to describe the importance of logistics in program life-cycle management. Dr. A. Michael Andrews II, our Deputy Assistant Secretary for Research and Technology and the Army's Chief Scientist, was also added to describe the issues around technology transition. These changes in program content provided our program executive officers, program/project/product managers, and acquisition commanders with a more comprehensive understanding of the challenges we must overcome in developing, acquiring, and sustaining the Objective Force.

Fielding the Army's initial Objective Force Unit of Action with the Future Combat Systems (FCS) is our highest development priority and our toughest challenge. We are building on the lessons of our success in acquiring Interim Force capabilities. Exploiting innovations in technology requires innovations in acquisition and logistics. Our success during the last 3 years of transformation shows that working as a professional team, we can achieve great things. For example, we *acquired* Stryker in just 18 months. The first Stryker rolled off an assembly line in Anniston, AL, this past April, and by August we were landing them in C-130s at Bicycle Lake in the National Training Center, Fort Irwin, CA, during Exercise Millennium Challenge. The first Stryker Brigade will achieve full operational capability in summer 2003.

We need the same determination and teamwork to field FCS in this decade. With FCS, the requirements, technology maturation, acquisition strategy, and costing are all being worked simultaneously. We have established a committed partnership among our warfighting customers, the acquisition workforce, and our industry Lead Systems Integrator, the Boeing-SAIC (Science Applications International Corp.) team. Our daunting challenge is to accelerate the Army's transformation while reducing development and production costs, time, and logistics demands for the fielded systems.

Army Chief of Staff GEN Eric K. Shinseki recently reaffirmed that without a transformation in logistics, there will be no transformation in the Army. We must work to aggressively reduce our logistics footprint and replenishment demand. This means that the deployed Objective Force must have dominant war-winning capabilities while deploying fewer platforms and logistics personnel. Many of the traditional combat service support demands must be designed out of new systems, and some must be provided with reachback capabilities to reduce stockpiles in theater. Logistics transformation will also rely on information technology for velocity management and real-time tracking of supplies and equipment. The Objective Force systems must achieve maintenance efficiencies through increased reliability and commonality across joint formations—in chassis, repair parts, fuel, munitions, and components. The transformation in logistics will change the way the Army transports, maintains, and sustains its people and materiel.

As critical as logistics transformation is to the Objective Force operational success, it is also important to remember that the path to Objective Force capabilities is through science and technology (S&T). As our warfighters say, S&T defines "the realm of the possible." A strong S&T Program provides options for responding to a full range of military challenges. Our S&T investment identifies and matures new technologies to produce the revolutionary capabilities needed by our soldiers now. Today's investments in S&T are also investments that will provide capabilities for future soldiers—those not even born yet. Maintaining the U.S. technological edge has become even more difficult as advanced technologies proliferate in key areas such as sensors, information processing, communications, and precision guidance. Our S&T Program focuses on unique military technologies that cannot be provided from the commercial world. We have the solemn responsibility to ensure that our soldiers are provided with the most capable and sustainable equipment. A vital and focused Army S&T Program ensures that we can provide America's soldiers with technology solutions to be "On Point for the Nation."

There is a great need for the Army in today's world. When people see what's going on in Afghanistan and in other hot spots around the world, they realize that need. Our Air Force, Navy, Marines, and Special Forces are doing a tremendous job. Still, it is clear that to get the last enemy and secure the outcomes, we need "boots on the ground." We need soldiers who are trained to go in and dig out an enemy who does not want to be dug out.

Our soldiers are fighting asymmetric battles by adapting systems and tactics designed to win the Cold War. While today's systems are performing superbly, we need to provide our soldiers with systems that are optimized for 21st century missions. We are at war today, and there is a great sense of urgency to get on with the Army's transformation. The longer we wait, the tougher it is for our soldiers. Fielding Objective Force capabilities in this decade is paramount. Together, let's make it happen—as an Army of one!

Claude M. Bolton Jr.

**Acquisition
Logistics
Technology**

Professional Publication of the AL&T Community

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FEATURES

DEPARTMENTS

COVER

Logistics sustainment of current and future systems is considered by many to be critical to the successful transformation of the Army.

EXCLUSIVE INTERVIEW WITH GEN PAUL J. KERN

COMMANDING GENERAL, U.S. ARMY MATERIEL COMMAND (AMC)

Interviewed by Army AL&T Managing Editor Cynthia D. Hermes

Army AL&T: **What do you hope to achieve during your tenure as AMC Commanding General?**

Kern: First and foremost, AMC will provide a broad range of support to the Army, particularly in view of the vast number of worldwide missions in which the Army is now involved. A major challenge, of course, is to effectively integrate all of our various support efforts. These efforts involve many organizations, including research, development, and engineering centers, and the program, project, and product managers supporting the Objective Force initiative.

Additionally, AMC is providing and storing ammunition for all the Services in support of the war on terrorism. For example, the bombs that the Air Force drops in Afghanistan are from McAlester Army Ammunition Plant, McAlester, OK, while some munitions are being provided by Tooele Army Depot, Tooele, UT. Domestically, AMC is also supporting the war on terrorism and clearly protecting the public through its chemical demilitarization effort. Actually, DOD's chemical demilitarization efforts are being integrated by AMC.

Thus, what I hope to achieve is continuous support in all of these areas as well as the improvement of our depot, supply, and maintenance operations and the way we support the U.S. Army and the other Services.

Army AL&T: **Thinking "outside the box" has long been a key part of your philosophy. How do you plan to apply that philosophy at AMC?**

Kern: Actually, we've already begun. For example, we recently distributed a strategic plan that encourages people to find new ways of doing business better. In addition, as we are speaking here today, the Association of the U.S. Army is sponsoring a logistics symposium that—for the first time ever—includes a discussion panel with our research and development laboratory directors. This is an important development because in the past, we tended to view many of our logistics issues as supply problems when in fact they
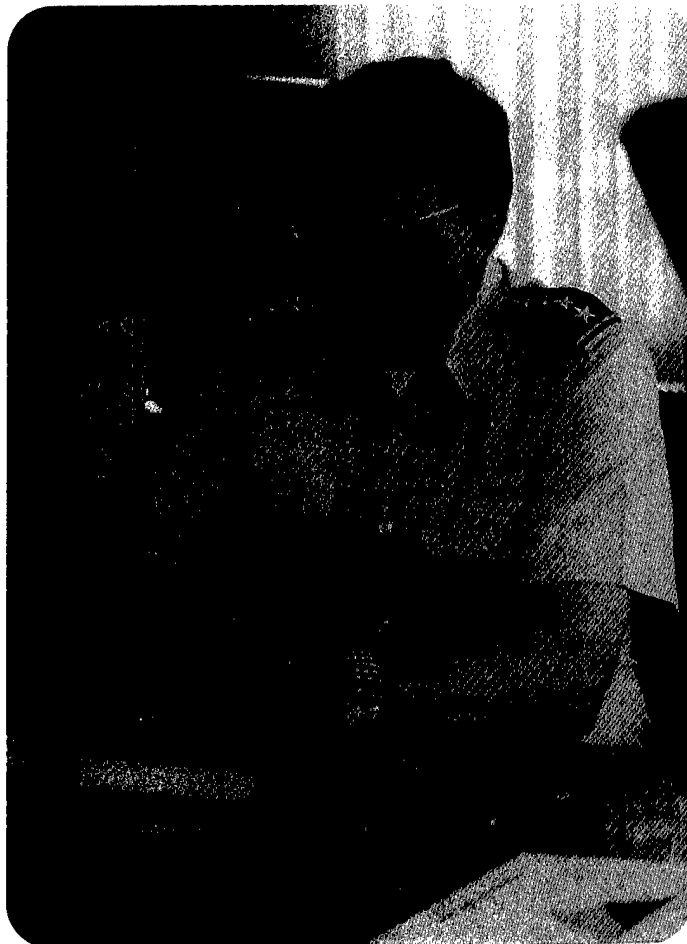
are really design problems that should be addressed by engineers.

To be quite candid, I selected an individual to tackle the design problem who is neither a government worker nor an engineer. He is an architect who runs a small firm in Michigan that has supported a number of our efforts, including those in the Offices of the Project Manager, Theater High Altitude Area Defense and the Program Manager, Chemical Demilitarization. Because he's an architect, he puts his emphasis on designing for people. In contrast, our engineers put their talents to work on designing to solve military-related problems. In combination, these perspectives allow us some creative thought about how we can support our soldiers better by thinking of new ways to solve problems.

We are also leveraging the expertise of our Reserve component people who are on Active duty. For example, at Red River Army Depot, Texarkana, TX, we have a young officer who, in his civilian work, created some lean manufacturing lines that are now being used at Red River. Further, we're taking that effort and expanding it throughout the entire command. Corpus Christi Army Depot, Corpus Christi, TX, and Anniston Army Depot, Anniston, AL, are two other sites where it is being applied.

Army AL&T: AMC headquarters (HQ AMC) is being reorganized. Could you comment on this initiative?

Kern: Effective May 1, 2002, AMC headquarters was provisionally reorganized to resemble Army headquarters in terms of having a G-1 through a G-8. People are a little surprised, however, that we don't have a G-4 (logistics element) at HQ AMC. Our response is that we already view ourselves as the Army's logisticians, and we provide ongoing support to the Army in that area.

Army AL&T: Establishment of a new AMC Research, Development, and Engineering [RD&E] Command is also said to be on your drawing board. What is the purpose of this new command?

Kern: I'm very excited about creating this command. I want to emphasize too, that Secretary of the Army Thomas E. White, Army Chief of Staff GEN Eric K. Shinseki, and Assistant Secretary of the Army for Acquisition, Logistics and Technology [ASAALT] Claude M. Bolton Jr. are solidly behind it. The real benefit of this new command is that it will significantly help us transition our basic research efforts—all the way through to our engineering work—into fielded equipment for our soldiers. AMC's RD&E Command will also ultimately help other organizations such as the Army Training and Doctrine Command in better defining requirements to solve recurring problems in the field.

I want to note also that our researchers are absolutely brilliant. In fact, last year during a 50-year celebration of Army Research Office achievements, it was announced that more than 25 researchers the Army has sponsored are Nobel Prize recipients. That's pretty impressive.

Army AL&T: A large percentage of DOD's civilian acquisition workforce will reportedly be retirement-eligible between now and 2005. How will this development impact AMC's mission, and what is your game plan for dealing with it?

Kern: This is probably the biggest concern that I have because more than 96 percent of AMC's employees are civilians. As we have reduced the size of the Army and, accordingly, AMC, we have created an organization that encourages employees to stay on longer, which makes it difficult to hire replacements. Everyone focuses on the average-age issue, but the real challenge is the very small number of qualified replacements. Thus, I must recruit civilians for our organization while they still have the opportunity to learn from the people who have worked here for 20 or more years. Before those people retire, they must be able to pass on their expertise to another generation. If I don't recruit individuals and fill the impending big personnel gap with people under the age of 40, we're going to wake up 5 or 10 years from now and no one will be here.

Our research and development people are canvassing the universities, talking to student researchers to ensure that they understand there is a job for them in the U.S. government and that they can continue much of their same research. Many of today's young university students don't even know that they can work for the Department of the Army as a civilian.

AMC is also working with the Assistant Secretary of the Army for Manpower and Reserve Affairs for help with apprenticeship and intern programs. We may also need some new legislation to preclude further personnel cuts that could result in the loss of the people who we just hired. This was a problem in the past. For example, we had fairly robust apprenticeship and intern programs in the late 1980s, but when the Quadrennial Defense Review reduced our staff, those individuals were some of the very first people to be cut.

One of my key challenges, in addition to recruiting and incentivizing people to come to work for the government, is to ensure that we can retain them in the future. Another challenge is how to make the command more effective with fewer people. This will probably require greater communications and improved collaboration.

Army AL&T: What is AMC's role in America's war on terrorism?

Kern: AMC has multiple roles in the war on terrorism. First, let me say that virtually any item our soldiers use has involved AMC. This includes ammunition, food, clothing, and even the vehicles our soldiers ride on such as helicopters, wheeled vehicles, and tracked vehicles. AMC also conducts the basic research used to develop these items and also provides supply and sustainment services in support of them.

Protecting AMC installations is another AMC role in support of the war on terrorism. In fact, almost 2,500 Reserve component soldiers are specifically assigned to this task. In addition, AMC is assisting numerous other government organizations in areas where we have some real expertise, such as biological and chemical weapons defense. AMC probably has the world's leading experts in these two areas.

Our logistics support role is also very important. For example, we recently welcomed back some personnel who were in Afghanistan and Uzbekistan setting up supply and support bases. These people installed pipelines, established camps, and provided technical support. Whether it's Apache helicopters or special armor developed to save our soldiers' lives, AMC has played a role through its operational elements.

We are also working to ensure that our pre-positioned equipment is adequately supported. AMC runs and monitors the pre-positioning ships and supply depots where equipment is stored to ensure the equipment is correctly organized and maintained for any future operations.

Finally, we are working closely with the Central Command to make sure that our people can adequately respond to any supply and maintenance shortcomings. In short, there probably isn't any part of the war on terrorism, whether it's at home or abroad, that doesn't include some of our people.

Army AL&T: Secretary of the Army Thomas E. White has indicated that being at war is no excuse for not implementing reform of the Army's business practices. What business practice reforms do you envision for AMC?

Kern: I envision continuous business practice improvements. For some time, we have worked to create enterprise solutions to replace older software management tools that are used in the supply system. Two highly successful examples of these enterprise solutions are the Single Stock Fund and the Wholesale Logistics Modernization Program. Our reorganization initiatives that are underway and the new AMC Research, Development, and Engineering Command, which I discussed earlier, are some of the other business practice improvements.

At the request of Army Chief of Staff GEN Eric K. Shinseki, we also established a logistics task force headed by MG N. Ross Thompson, Commanding General, U.S. Army Tank-automotive and Armaments Command, and BG Jeanette K. Edmunds, Director of Sustainment, Office of the G-4. The purpose of that task force is to develop a logistics transformation plan that will address processes, organizations, and business practices throughout the Army.

The strategic plan that I cited earlier also includes organizational business process changes. In addition, we are establishing lean manufacturing at a couple of our depots and we fully intend to train everyone on how to apply it.

We are also exploring how the other Services are doing their reforms, how we can help them, and how we can apply their reforms to meet our requirements. For example, I, along with other members of the Army leadership, recently visited with the Marine Corps to discuss their reform efforts. I also traveled to the Naval Air Systems Command at Patuxent River, MD, to discuss our aviation systems.

Further, AMC is a very active participant in the Joint Logistics Board, chaired by Diane K. Morales, the Deputy Under Secretary of Defense for Logistics and Materiel Readiness. She has originated a number of initiatives we are involved in that will change all of our business processes and enhance our enterprise solutions.

Army AL&T: In view of the current turbulent world environment, what advice would you offer to someone who might be considering a career in the Army acquisition workforce?

Kern: I'd tell them to go for it! It's an exciting field, and we have never had a greater number of emerging technologies that can be applied to meet our warfighting requirements. In fact, we just started a basic research effort in nano- and microtechnologies at MIT, and we're doing research in modeling and simulation at a newly established center at the University of Southern California. In addition, we are continuing development of our Future Combat Systems, the Objective Force, and a major virtual information system that will allow us to better view all aspects of the battlefield, from logistics to operations.

I believe that all of these initiatives—in addition to system recapitalization efforts—offer individuals tremendous career opportunities and the chance to vastly improve our country's security.

Army AL&T: Is there anything else you would like to address?

Kern: Prior to joining AMC, I served in the Office of the Assistant Secretary of the Army for Acquisition, Logistics and Technology [OASAALT]. That office published a recommendation that called for placement of all program executive officers and program managers under the OASAALT. As such, when I arrived here at AMC, I was concerned about the potential negative impact that action might have on AMC's workforce and mission. However, based on what I've seen since I arrived, I am very confident that we are on the right track. I am also encouraged following a recent meeting I had at the U.S. Army Tank-automotive and Armaments Command with Assistant Secretary of the Army for Acquisition, Logistics and Technology Claude M. Bolton Jr.; Military Deputy to the ASAALT/Army Acquisition Corps Director LTG John S. Caldwell Jr.; and LTG Charles S. Mahan Jr., G-4. That meeting resulted in a general consensus that the acquisition and logistics communities can best solve problems through a combined effort. In other words, a *we-they* scenario will not get the job done. It must be an *us* approach.

It will also be necessary for individuals in different career fields, such as certified acquisition managers, scientists and engineers, and logistics personnel, to work together, to better organize, and to integrate processes. Although some people view all of this as a challenge, I view it as an opportunity to achieve a great deal. I really believe we have a tremendously talented pool of people who, by working together, will make a huge difference for the Army.

LINKING ACQUISITION AND OPERATIONAL LOGISTICS

LTG Charles S. Mahan Jr.

"The Army will aggressively reduce its logistics footprint and replenishment demand."

—Objective Force White Paper

Introduction

The Army has set its sights on the future. The future is the Objective Force, and the Army is counting on significant reductions in both the logistics footprint and sustainment costs. As we design the Objective Force platforms, those reductions will be achieved when supportability is effectively balanced with cost, schedule, and performance.

In the past, the intense focus on cost, schedule, and performance often forced program managers (PMs) to "trade off" the sustainment aspects of a new system. Over time, logisticians became convinced that neither sustainment issues nor sustainment strategies were adequately represented during the "concept to fielding" process. An example of this was the procurement of the Tactical Unmanned Aerial Vehicle (TUAV). While the Army policy (reinforced by DOD Directive) calls for a single fuel on the battlefield, JP8, the TUAV uses motor gasoline to operate. This small difference results in significant planning, deploying, and supporting problems for logisticians. Regardless of the fact that heavy fuel engine "power-to-weight" output drove the decision, the second- and third-order effects of that decision were profound.

Previous failures to adequately address life-cycle costs and the sustainment strategy have resulted in significantly increased long-term costs for the Army. For that reason, the Assistant Secretary of the Army for Acquisition, Logistics and Technology signed a February 2000 memorandum that stated supportability would be co-equal to cost, schedule, and performance. While I suspect that most PMs, commanders, and logisticians feel that inadequate attention is paid to sustainment decisions made during the long procurement process, the logistics and acquisition communities share that responsibility and must work together to reduce future sustainment challenges.

The Future Army

We believe that future conflicts will be fought over great distances with fast moving units. Units of action (UAs) will be self-sustaining and will operate independently for 5-7 days. UAs won't be able to execute "pulsed" operations unless we design reliable and sustainable equipment. Significantly improving the reliability and sustainability of our equipment not only lowers the life-cycle costs of the system and increases readiness, but also reduces the logistics footprint.

Even moderate increases in fuel efficiency can result in significant savings in force structure. To illustrate, greater fuel efficiency means fewer fuel tankers. Fewer tankers mean fewer drivers and fewer mechanics, which lead to fewer people to feed, house, and protect, thus significantly reducing the logistics footprint.

Significantly improving the reliability and sustainability of our equipment not only lowers the life-cycle costs of the system and increases readiness, but also reduces the logistics footprint.

Currently, the Quartermaster and Ordnance Branches are the two largest branches in the Army. We can only reduce the size of those branches if we improve the reliability and sustainability of our equipment. Go ahead—put us out of business! We must push the technology envelope and work with industry to reduce the logistics footprint as much as we can, while ensuring no degradation to readiness and warfighting capability.

Industry Challenge
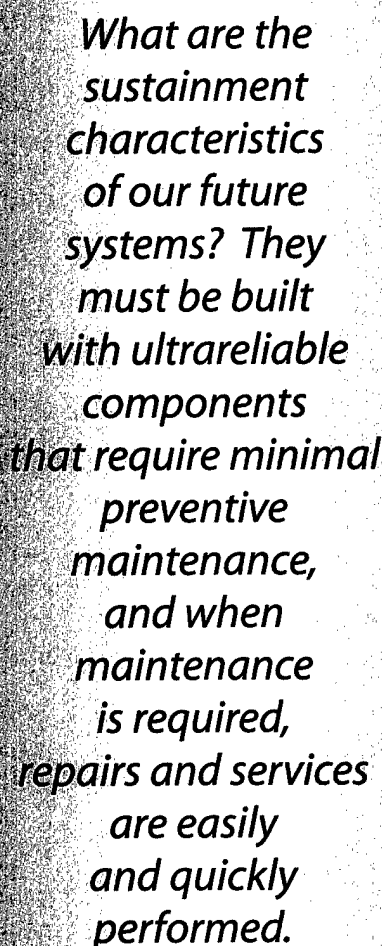
We must challenge Defense contractors and their engineers to design systems that meet tough requirements. We must set high thresholds: systems must be self-reporting, no vehicles that get less than 30 miles per gallon, no reparables, no spares, no system without embedded prognostics and diagnostics. The mean time between failure must be greater than the duration of our pulsed operations. If systems don't perform as advertised, there should be penalties. We have had extensive discussions on whether reliability should be a key performance parameter (KPP). I understand there is great resistance to this idea; however, our future warfighting concepts are dependent on reliable, sustainable systems. Reliability as a KPP would ensure that we don't procure a system that won't meet Objective Force requirements. Sustainment trade-offs are less likely to occur if supportability is weighted equally to cost, schedule, and performance during the acquisition process.

We will have to pay upfront for such "ultrareliable" systems. We'll need to ensure that we properly compensate our Defense partners for meeting our sustainability and reliability requirements. Consider the automobile industry, where the greatest profits come from aftermarket sales (in service and maintenance), not from the sale of the vehicles themselves. Given that our systems are retained in our force for 30-60 years, I believe the same model applies to the Defense industry. That is, we need to develop the proper incentives and rewards for contractors who meet our requirements.

Future Systems Sustainment

What are the sustainment characteristics of our future systems? They must be built with ultrareliable components that require minimal preventive maintenance, and when maintenance is required, repairs and services are easily and quickly performed. Future systems have no requirements for special tools or

> *What are the sustainment characteristics of our future systems? They must be built with ultrareliable components that require minimal preventive maintenance, and when maintenance is required, repairs and services are easily and quickly performed.*

external test, measurment, and diagnostic equipment. Cargo-carrying vehicles have embedded upload/download materiel handling capability and robotic follow-on capability. This is a tall order, but I am confident we can meet these requirements if we give proper emphasis to designing such characteristics at the front end of the acquisition process.

Conclusion

Transformation applies to everyone across the Defense establishment. We can no longer take the "business as usual" approach. We must be innovators, futuristic thinkers, and risk takers. The most critical component of combat support (CS)/combat service support (CSS) transformation is linking acquisition and operational logistics. The Chief of Staff of the Army's logistics transformation charter tasked the G-4 to achieve three initiatives: enhance strategic responsiveness, reduce the combat zone CS/CSS footprint, and reduce the cost of logistics without reducing warfighting capability or readiness. Significant reduction in the logistics footprint and costs will only occur when supportability (including the desired characteristics of reliability, maintainability, and fuel efficiency) is effectively balanced with cost, schedule, and performance.

LTG CHARLES S. MAHAN JR. is the Army G-4. He has 34 years of service and has commanded at all levels in the Army, including combat tours in Vietnam and Southwest Asia. He is a graduate of the Army War College, the Command and General Staff College (School of the Americas), and the Logistics Executive Development Course. He holds a B.S. from the U.S. Military Academy and an M.B.A. from the University of Miami.

"Those who cannot remember the past are condemned to repeat it." Unfortunately, this now famous statement by philosopher George Santayana has been proven true when one looks back at the history of the U.S. Army's acquisition and logistics efforts. I've seen and lived through several instances of our ignorance of the importance of logistics and have made it my mission to stop us from repeating the errors of our past. However, we cannot do that from the operational side alone. We need the acquisition community to be decisively engaged in our efforts to improve system supportability and sustainability.

In the last four or five wars that our country has fought, we furnished hardware and warfighting capabilities in sufficient quantities but failed to build into our systems the proper supportability characteristics to ensure success. We were lucky to have time to develop a logistics infrastructure, acquire critical repair parts and supplies, build stockpiles, and organize ourselves for successful sustainment.

Today, we do not have the luxury of time. Improved supportability concepts must be built into our new and redesigned systems. We must minimize the logistics requirements and structures on the battlefield. Reliability is no longer a desired quality; *ultra*reliability is now an essential system quality. Stockpiles are no longer affordable. Old logistics support structures disappear and we are doing more with less every day. Only by diligence and careful attention to past mistakes will we be successful in the future.

In World War II, the Army logistics community planned on 114 divisions. However, when it was determined that we needed a stronger logistics support structure, that number was reduced to 90 support units. Even so, Patton's Third Army ran out of fuel and armor-piercing ammunition. I'm quite sure of that fact because I was there at that time as a company commander in the 47th Tank Battalion. As distressing as those shortages were to us, the critical shortage of coffee was even more emotional!

THE IMPORTANCE OF IMPROVED SUPPORTABILITY: A HISTORICAL PERSPECTIVE

Eric A. Orsini

To avoid a 21st century repeat of Patton's Third Army pitfalls, we need to radically reduce our battlefield fuel requirement. We need to rapidly capitalize on new alternate fuel technologies. We absolutely need to improve precision munitions to reduce the battlefield ammunition requirement. Systems must be more reliable so that fewer mechanics and fewer contractors are in our battlespace. Remember that a logistics "tail" is also a great consumer of supplies, and protecting supply lines drains combat power from the forward battle.

Why do I continue to lecture the acquisition community on the criticality and pitfalls of logistics? It's because you dictate the logistician's battlefield. When you trade a supportability improvement for cost, schedule, or performance, you add another logistics burden on a very lean support structure. When you add a warfighting capability but fail to thoroughly consider the life-cycle support concept and costs, you doom the logistician to failure. Will logisticians eventually prevail? Of course. We always do. Historically however, it has taken us much longer than our combat leaders desire.

Logisticians and acquisition program managers need to stay "linked at the hips" throughout a system's development. Both need to keep foremost in their minds the absolutely critical effect of their decisions on the soldiers who man that system and on the dwindling number of support troops who must keep it running and supplied.

As our acquisition community goes about its superb work each day supporting the world's greatest Army, remember some of the great military disasters or near-disasters of our history that were attributed to logistics planning and capability failures:

• Confederate General Lee's invasion of the North during the Civil War failed because of the inability to move supplies and secure supply lines.
• WWI General of the Armies John J. Pershing had to dismantle five combat divisions and turn them into supply and service units to support his force.
• General Patton's WWII task force, which was sent to liberate POWs of Hammelburg, became prisoners themselves when, outgunned, they outran their fuel supply, failed to secure supply lines, and failed to plan for enough transport for the POWs.

It's up to us to make sure only the successes of history are repeated. Then logisticians can work on that coffee shortage problem!

ERIC A. ORSINI, Special Assistant to the Army Deputy Chief of Staff, G-4, served as the Deputy Assistant Secretary of the Army (Logistics) from 1975 to 2002. He is a retired U.S. Army colonel and a WWII veteran.

TRANSFORMING THE INTEGRATED LOGISTICS SUPPORT PROCESS AT HQDA

Larry Hill

Introduction

In February 2000, Paul J. Hoeper, then Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASAALT) and Army Acquisition Executive (AAE), took a bold step by disseminating Army policy directing that supportability be elevated to the same status as cost, schedule, and performance for Army acquisition programs. The Army's Integrated Logistics Support (ILS) vision is that the ILS process be:

> "A lean (streamlined, proactive), agile (flexible, tailorable) and responsive (right product/service, on-time) process to provide the best, most affordable (lowest life cycle cost), logistic support and sustainment (high readiness) of the soldier, all Army systems, and equipment well into the 21st century".
>
> Army Regulation (AR) 700-127 *Integrated Logistics Support*

Hoeper recognized that achieving the Army's ILS vision is key to successful Army transformation; after all, one of the Army's transformation tenets is sustainability. The Army's transformation systems must not only be responsive, deployable, agile, versatile, lethal, and survivable, they must also be logistically sustainable at a reduced logistics footprint and cost. Therefore, the Army must develop and field materiel systems that are fully supportable and meet system readiness objectives at the minimum life-cycle cost. Achieving the system's supportability goals is absolutely critical to total system performance.

Early in the acquisition process, program, project, and product managers (PMs) must conduct supportability planning, analyses, and trade-offs to optimize and integrate supportability, performance, and life-cycle cost. If PMs do not plan for supportability, then the field cannot optimize system sustainment. The supportability planning effort is what identifies, develops, tests, and acquires the logistics support products that provide sustainability in the field.

The Army leadership recognized the need for better integration of acquisition and logistics functions on the Army staff. As part of the recent HQDA realignment, a new ILS office was created within the Office of the ASAALT. The intent was to provide better management and oversight of ILS throughout the Army. This new ILS office will be responsible for overseeing the ILS process, from both a policy and an execution standpoint, to ensure fully supportable systems are fielded in the future.

ILS Directorates

The new OASAALT ILS Office consists of four directorates—the ILS Operations and Policy Directorate and three materiel system directorates: Combat ILS, Combat Support ILS, and Combat Service Support ILS. The ILS Operations and Policy Directorate is responsible for developing Army policy for ILS, materiel release, and total package fielding. This policy mission encompasses key ARs such as AR 700-127, *Integrated Logistics Support*, and AR 700-142, *Materiel Release, Fielding, and Transfer*. This directorate also develops the Army policy and implementation guidance for a relatively new Office of the Secretary of Defense (OSD) initiative, Performance Based Logistics (PBL). In the area of materiel release, the policy on interim materiel release (IMR) has been revised and is currently being finalized for signature. The IMR policy pertains to systems under development that are pre-Milestone C and scheduled to be fielded to the Interim Brigade Combat Teams and other eligible units.

The three materiel system directorates serve as the Army's independent logisticians for their respective commodities. To that end, each directorate is responsible for providing oversight and management of the ILS programs for their assigned systems, assisting the PMs in identifying and resolving supportability issues for their programs, and having a representative attend integrated process team meetings and other forums to review and comment on numerous program documentation. This documentation includes requirements documents, the Acquisition Strategy, the Supportability Strategy, the Test and Evaluation Master Plan, and other key documents. Each directorate provides the independent logistician position for materiel release. In the performance of these duties, each directorate interfaces with program executive offices (PEOs) and PMs, the Army Materiel Command and its major subordinate commands, the Army Training and Doctrine Command, major commands, the Army Test and Evaluation Command, the HQDA staff, and other organizations in the acquisition and logistics community. In addition, each directorate assists the G-4, Logistics, as the Responsible Official for Sustainment in identifying supportability issues for his attention at the Army Requirements Oversight Council and the Army Systems Acquisition Review Council (ASARC).

Policy Changes

There are two ILS policy changes currently being discussed. The first involves resuming the DA-level ILS

SUPPORTABILITY EQUAL TO COST, SCHEDULE, AND PERFORMANCE

HOW: SPTABILITY ANALYSIS/PLANNING

WHEN: DURING ENTIRE ACQ PROCESS

SUPPORTABILITY ⟹ **SUSTAINABILITY**

WHO: ILS MGR

WHY: TO REDUCE O&S/TOC

| MS A | MS B | MS C | FUE |

MS – Milestone O&S – Operations and Sustainment
FUE – First Unit Equipped TOC – Total Ownership Cost
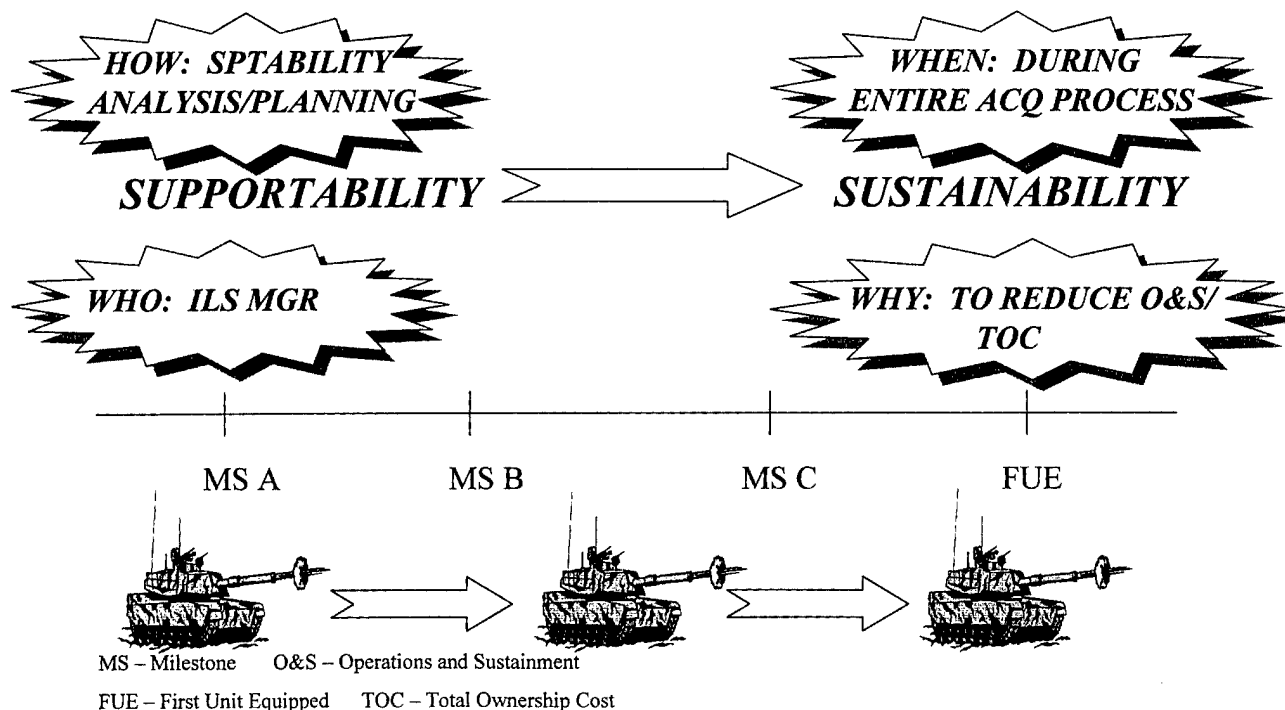
reviews, and the second concerns a requirement for a formal approval of the Supportability Strategy by the Responsible Official for Sustainment. The intent is to give the Army a forum to ensure that ILS issues are identified and resolved before milestone decision reviews. Additionally, this will ensure that system supportability planning receives specific review and approval from the Army leadership. Again, the goal is to ensure the Army fields systems that are fully supportable and reduce the logistics footprint at the lowest possible life-cycle cost.

PBL

The Army is currently implementing the new OSD PBL initiative. Through the Defense Planning Guidance and the Quadrennial Defense Review, the Services are directed to implement PBL on all new acquisition programs and acquisition category (ACAT) I and II legacy programs. PBL is a strategy for weapon system product support as an integrated performance package designed to optimize system readiness. It meets performance goals for a weapon system through a support structure based on performance agreements with clear lines of authority and responsibility.

PBL performance goals are measured on system-level, output-oriented metrics such as readiness, cost, and customer wait time. Under PBL, for example, a PM manages suppliers, not supplies. The PM would buy readiness, not parts. The OASAALT ILS Office, the Army lead for PBL, has solicited input from the PEOs and PMs for systems where they have already implemented PBL, systems that are candidates for PBL implementation, and systems where PBL will not be implemented because it is not cost-effective or feasible. The AAE is reviewing the input provided by the PEOs and PMs for approval. After approval of their input by the AAE, PMs will begin to implement their PBL strategy.

Summary

In summary, this new ASAALT ILS organization is long overdue and will go a long way in assisting the Army in implementing Hoeper's February 2000 policy of making supportability coequal to cost, schedule, and performance. A rigorous and responsive ILS process will enable the Army to achieve its transformation goals and field world-class, fully supportable systems to our soldiers.

LARRY HILL is the Director of the ILS Operations and Policy Directorate, OASAALT ILS Office. One of the Army's senior acquisition logisticians with more than 30 years of federal service, he has a B.S. in electrical engineering from Virginia Tech and an M.S in systems management from the University of Southern California.

USING OPERATIONAL ARCHITECTURE DESIGN TOOLS FOR LIFE-CYCLE SUSTAINMENT PLANNING

Nancy R. Johnson

Introduction

Imagine making all the right choices in your next major endeavor. What it would take to make that happen is the ability to look at alternative courses of action, gain insight into their relative merit in given conditions, assess the trade-offs against other alternatives, and predict the future. Except for the last item, the Army might just have such a capability to help in the development of future weapon systems.

With that in mind, the U.S. Army Logistics Integration Agency (USALIA) has the capability to bring process-oriented logisticians together with materiel- and systems-oriented acquisition personnel and operational architecture design tools to analyze sustainment options as they are considered during the life-cycle process. Given today's austere funding environment and the number of years we historically retain our weapon platforms, it is clear we must ensure that we are acquiring new capabilities that can be economically sustained for many years to come. If we look at the ratio of acquisition cost to life-cycle cost for most of the major weapon systems in our current inventory, we can clearly see that sustainment costs typically exceed initial procurement costs by substantial amounts.

DOD Document Changes

Recent changes to the DOD-5000 series of documents have put new emphasis on managing the total life cycle of new weapon systems through the integration of acquisition and logistics processes. DoD Instruction (DoDI) 5000.2, *Operation of the Defense Acquisition System*, states "The outcome of systems acquisition is a system that represents a judicious balance of cost, schedule, and performance in response to the user's expressed need; that is interoperable with other systems...; that uses proven technology, open systems design, available manufacturing capabilities or services, and smart competition; that is affordable; and that is supportable. Once deployed, the system is supported throughout its operational life and eventual disposal in post-systems acquisition using prudent combinations of organic and contractor service provided in accordance with statues."

Further, DoDI 5000.2 tells us that sustainment strategies must evolve and be refined throughout the life cycle. It charges the program, project, or product manager (PM) with the responsibility to ensure that a flexible, performance-oriented strategy to sustain systems is developed and executed. It further elaborates that this strategy will include consideration of the full scope of operational support, such as maintenance, supply, transportation, data management, manpower, and training. This document also advocates the extensive use of modeling, simulation, and analysis throughout the acquisition process to integrate the activities of the principal decision support systems by creating information for decisionmakers.

The Army has implemented its Performance Based Logistics Program in response to this requirement. It is a product support strategy in which the requirements for providing logistical functions are specified in high-level, outcome-oriented performance statements leading to increased availability and readiness of weapon systems and their components. These performance requirements, such as operational availability, mission-capable rate, customer wait time, and life-cycle cost, are usually stated without specifying the processes and procedures to obtain that result. This is where the operational architecture design tool would be applied.

Design Tool

If operational architecture design tools, such as Gensym's G2 Rethink, were used to assess the effect of proposed support strategies on the end-to-end logistics system, the Army might be able to evaluate suggested concepts for support. When applied, such a tool could enable the explicit description and documentation of the desired relationships among the various elements of weapons system sustainment. Alternative logistics concepts could be evaluated to determine the best solution for the specific weapons system being acquired and/or for the unit set of equipment. The goals of this effort would be to contribute to improved readiness and reduce total weapons system life-cycle ownership cost. Direct benefits of using this type of approach include: influence of product design for supportability, support strategy development, and identification of sustainment policy issues requiring resolution.

The Business Process Redesign Laboratory at USALIA has already used G2 Rethink to support the PM Single Stock Fund in examining the requisition and materiel return processes for the entire supply chain. For this project, the tool was instrumented to capture the cost and performance metrics defined by the Single Stock Fund Office.

An ongoing project in the laboratory involves assessing the impact of future embedded diagnostics and prognostics equipment in combat and support systems. Within this concept, data are transferred from the platform to the appropriate decision-making level to expedite repair or replacement actions. This project will enable decisionmakers to see the overall effect on the maintenance process as well as measure resulting changes in operational availability and logistics footprint. Having worked both of these projects, the laboratory is well positioned to apply this experience to life-cycle logistics support planning.

Weapon Systems Sustainment

Here's how it might work for weapon systems sustainment. A "base case" sustainment process would be developed using Army concepts and doctrine as the foundation. As various

sustainment alternatives such as Contractor Logistics Support (CLS) are considered or proposed, they would be quantitatively compared to the base case. Imagine the potential this kind of analysis provides. The Army will have the opportunity to measure the specific impact of certain enablers such as prognostics, diagnostics, modular design of components, multipurpose parts and components, and increased system reliability. It is envisioned that potential "stakeholders" would use the results of this analysis during the Army Systems Acquisition Review Council (ASARC) review process.

The architecture would be developed in an iterative fashion, adding more detail and quantitative capability as needed to support the decision requirements over the acquisition life cycle. Examination of the readiness and supportability characteristics early in the design process will offer the largest range of choices and trade-offs. Specifically, the model could evaluate logistics support alternatives such as CLS supply, CLS maintenance, recapitalization, and prime vendor support to determine the best sustainment strategy over time. In addition, G2 Rethink could measure the effect of these alternatives on areas such as fleet readiness, depot workload, and cost. Adjustments to variables during repeated runs of the model would provide sufficient information on which to base recommended sustainment strategy.

It is understood that core metrics may vary by individual weapons system depending on the operational aspects of the system that the model is examining. The identification of these sustainability variables will be determined in conjunction with PBL parameters. As a minimum, the initial metric's focus will be on both acquisition cost and life-cycle cost.

Life-Cycle Model

Here's how the employment of this operational architecture tool, G2 Rethink, will fit into the Army's life-cycle model. As you know, the ASARC provides senior acquisition managers and functional principals the opportunity to review designated programs. This is done at formal milestones to determine a program or system's readiness to enter the next acquisition phase. They are supported in the decisionmaking process by integrated product teams comprised of representatives of each of the Army staff elements, acquisition support activities such as the Army Materiel Systems Analysis Activity and Cost and Economic Analysis Center, and the appropriate program executive officer and PM offices. The ASARC is co-chaired by the Army Acquisition Executive and the Army Vice Chief of Staff.

The life cycle of an Army weapons system begins at Milestone A when the Milestone Decision Authority (MDA) approves entry into the Concept and Technology Development phase. This phase is characterized by efforts pointed toward a specific military need and the development and evaluation of the feasibility and practicability of proposed solutions. Initial operational support and infrastructure requirements within a family of systems are defined for the most promising concepts during this phase. Life-cycle cost estimates are prepared and logistics planning is initiated. During this phase, the operational architecture design tool would be applied to evaluating the impact of various system design initiatives that directly affect sustainment; e.g., modular design of components and subsystems, redundant system capability, and multipurpose parts or components.

Milestone B

Milestone B typically marks the beginning of an acquisition program and authorizes entry into the System Development and Demonstration Phase of the life cycle. The full funding of the program is also required at Milestone B. This phase has six purposes as follows: development of a system; reduction of program risk; designing for producibility; assuring affordability; ensuring operational supportability; and demonstration of system integration, interoperability, and utility. The Materiel Fielding Plan is drafted and initial provisioning calculations are made during the System Development and Demonstration Phase. The materiel developer also finalizes the documents that describe the number of end items per unit and the number and skill levels of the personnel required to operate and maintain the new weapons system. These documents are used by the combat developer to prepare the final Basis of Issue Plan. In support of this phase, the operational architecture tool could quantify the impact of features such as unambiguous embedded diagnostics and prognostics on system operational availability and force structure requirements.

Milestone C

The Milestone C decision authorizes entry into the Production and Deployment Phase of the life-cycle model. The purpose of this phase is to achieve an operational capability that satisfies mission needs. Low rate initial production gives us a limited quantity necessary for operational testing and ensures manufacturing operations are adequately moving toward full-rate production. Midway through this phase, the MDA makes the full-rate production and deployment decision.

The Operations and Support Phase follows full-rate production and deployment. The sustainment program's objectives are to execute a support program that meets operational support performance requirements and to do so in the most cost-effective way for the life of the weapons system. The PM's sustainment strategy includes consideration of the full scope of operational support, such as maintenance, supply, transportation, sustaining engineering, and spectrum supportability. The operational architecture tool will also provide for periodic reassessments as changes in logistics strategies are considered.

The Army's Future Combat Systems (FCS) is scheduled for an ASARC Milestone B Decision Review on April 15, 2003. Based on past history, we can anticipate that the Army will be fighting with and sustaining this weapons system for many years. This new acquisition program presents an opportunity to apply a business process analysis and specifically the G2 Rethink operational architecture design tool to make the most informed life-cycle sustainment decisions for the FCS.

NANCY R. JOHNSON is a Strategic Logistics Program Specialist in the Business Process Redesign Division of the U.S. Army Logistics Integration Agency. She has more than 20 years of experience as a logistician, which she brings to her position as Team Leader of the Business Process Redesign Laboratory. She has a B.S. degree from Penn State University.

AUTOMATIC IDENTIFICATION TECHNOLOGY IN LOGISTICS OPERATIONS

Jerry D. Rodgers and Jeffery D. Fee

Introduction

Automatic Identification Technology (AIT) includes a variety of read and write data storage technologies that provide an efficient means to capture, store, and retrieve source data with minimum human intervention. Because no single AIT device can satisfy the Army's logistics source data automation, identification, and tracking requirements, the Army embraces a family of AIT devices.

The Army has used AIT since 1981 when the Logistics Application of Automated Marking and Reading Symbols (LOGMARS) Program was introduced for bar coding supplies. AIT usage was limited to bar coding technology until the early 1990s.

In every major deployment during the 20th century, DOD has been plagued by the inability to easily identify the contents of shipping containers entering a theater of operations. This was never more evident than in Operations Desert Shield and Desert Storm when thousands of containers had to be opened, inventoried, resealed, and then reinserted into the transportation system. This was necessary because soldiers could not identify their contents. As a result, in FY95, the Total Distribution Program (TDP) Action Plan was developed and approved by the Army Vice Chief of Staff to resolve supply and distribution problems that surfaced during the Gulf War.

The primary focus areas of the TDP include Army total asset visibility (ATAV) and in-transit visibility (ITV). AIT provides source data automation to enhance asset visibility while reducing manual processes and human intervention, thereby increasing data accuracy and validity. AIT augments and interfaces with existing and emerging Automated Information Systems (AISs). ATAV seeks to provide timely supply and transportation information to commanders and materiel managers on Army assets moving through the logistics pipeline. AIT enables ATAV, including intratheater tracking, when properly integrated into AISs associated with the various classes of supply and transportation, and installed at key distribution nodes along the pipeline.

A soldier works with the Automated Manifest System, which takes source data from a Standard Army Management Information System and writes to AIT media (2-D bar code, optical memory card, and RF tag).

AIT Applications

AIT is used to provide content visibility and nodal tracking of sustainment cargo and cargo in support of deploying/redeploying forces.

Army cargo and equipment move from a CONUS industrial and depot base to supply support activities or tactical assembly areas in a theater of operations through various transportation modes and nodes. This is generally known as the logistics pipeline, and it applies to all classes of supplies with some exceptions. Supplies and equipment are also returned to the CONUS depot and industrial base through the reverse pipeline.

The Army uses AIT to track sustainment and retrograde shipments and to assist in the automated process of closing out transportation reports. AIT is also applied to deployment/redeployment operations to provide commanders at all levels with the location and status of deploying units as they move toward their destination. AIT is used to automate the force-closure process. The deploying unit commanders, along with the supporting and supported combatant commanders, have the capability to see closure of the force using the Internet.

AIT can be used for item marking to improve inventory accuracy, control, security, and accountability of small arms and other sensitive items. AIT can also be used to identify, sort, and track regulated hazardous materials; and to automate receipt, inspection, storage, issue, shipment, and inventory control of chemical and biological decontamination and protective equipment and overgarments. Maintainers will likewise benefit from AIT using maintenance business processes that will enable them to accurately document all of their maintenance activities throughout the entire product life cycle, thus facilitating configuration management.

Business Processes

AIT offers operators and supporting AIS program managers an excellent opportunity to re-examine and

An operations noncommissioned officer uses DTRACS to track sensitive cargo and mission convoy movement.

redesign their entire business processes. Efforts should be directed at re-engineering support activities, source data automation, and adoption of proven and successful industry business practices. AIT applications should not be limited to the specific logistics business process being enhanced, but should be applied to the operation as a whole. Business process re-engineering should always be applied rigorously as AIT is being introduced. Recent experiments have shown how the failure to examine related processes can hinder interoperability and efficiency.

AIT Infrastructure

The AIT infrastructure consists of the AIT devices and supporting servers, networks, communication links, databases, and transportation and supply nodes through which supplies, personnel, and units are tracked during movement along the logistics pipeline—from "factory to foxhole," from home base to theater-deployment locations. The AIT infrastructure has evolved to accommo-

date Army and joint business processes. A Radio Frequency Identification (RFID) AIT network has been established to monitor movement of sustainment cargo (air pallets and containers) from distribution depots in CONUS to theaters of operation by military and commercial lines of communication. This infrastructure consists of instrumented defense distribution depots and aerial ports of embarkation and debarkation including commercial ports such as FedEx and Emery.

Selected military and commercial seaports have also been equipped for tracking ocean cargo. Theater and corps-level supply support activities are being equipped to track intra-theater/corps shipments of supplies, repair parts, and components, including retrograde to CONUS. Selected Class I vendor facilities in CONUS have been outfitted to read/write radio frequency (RF) tags for direct vendor delivery of rations from those sites. Information gathered from tagged shipments is reported to ITV servers and relevant AISs and

RF Interrogator and Link (wireless modem) being used at Tuzla Air Base, Bosnia.

In a fully integrated AIT environment, Army maintainers create and use accurate, timely information about the activities they perform and products they maintain. In an automated environment, the latest information is available on demand, and the maintainer easily updates it. The information provides the maintainer specific product repair and performance histories, links to appropriate technical data and troubleshooting guides, and tracks comprehensive configuration information. Other Army materiel managers access the information to support their management activities. Contact memory buttons, bar codes, RF tags and related readers and writers, and servers and communication networks will interface with maintenance automated information systems that support Army maintenance activities worldwide.

Supporting Capabilities

The Army uses various related technologies to augment the Army's AIT infrastructure. Several of these are discussed below.

• A Business Process Server (BPS) is an AIT-enabling technology. A BPS is used when an AIS does not have the ability to interface with AIT devices such as RF tags, optical memory cards, or bar code readers and writers. The BPS acts as an AIT translator by automatically accepting and converting information from AIT sources to the formats required by the supported AIS. The BPS also performs front-end data input and output functions for the AIS.

• ITV servers provide local database storage and transmissions of AIT data to a central database and to other networks. When an RF tag is written, license plate, commodity, and transportation control and movement document (TCMD) data are uploaded to a regional ITV server. Additionally, when an RF tag is read at a node, the tag identification number and the "date-time-group" information are uploaded to a regional

provides content visibility and shipment status.

The deployment infrastructure consists of CONUS power projection platforms and selected power support platforms. These include posts, camps, and stations and their supporting transportation nodes. The Army has installed AIT at selected ports through which designated Active and Reserve deploying units and their required support packages flow from their home stations to their assigned deployment locations in a theater of operations. Tagging vehicles, air pallets, and containers enables commanders to observe and track unit movements throughout the deployment process. Early Entry Deployment Support Kits (EEDSKs) that provide mobile AIT capabilities are placed at selected critical locations to support power projections where it is not cost-effective or efficient to install a fixed AIT infrastructure.

The ammunition AIT infrastructure consists of ammunition production facilities, depots, ports, and supply points along the logistics pipeline. Ammunition is processed, shipped, and tracked using linear and two-dimensional (2-D) bar codes and RF tags applied at ammunition plants and depots and transported over roads and rails to CONUS ports. The ammunition is then shipped via overseas ports to retail ammunition supply points in a theater of operations. Fixed and hand-held interrogators gather related data and pass it to various nodes along the pipeline and to ITV servers.

ITV server. There is a regional ITV server located at Friedrichsfeld, Germany, and Taegu, Korea. The national ITV server in CONUS collects all AIT data from the regional ITV servers and from CONUS sites and forwards it to the Global Transportation Network (GTN), the ATAV server, and the joint TAV server. The Army Quartermaster School maintains a similarly configured ITV server at Fort Lee, VA, for training purposes.

• Flyaway kits contain RF/AIT equipment configured for mobility, which provides a temporary capability to capture in-transit transportation and asset visibility data at austere locations where elements such as communications and power are not adequate or configured to support AIT operations. The Army has developed one type of flyaway kit, the EEDSK, to provide a mobile AIT capability in support of force projection.

• The Deployment and Sustainment Support Tool (DS2T), formerly known as the Computer Automated Transportation Tool, is a stand-alone tool with the capability to generate standard DOD supply, transportation, and shipping documentation. DS2T is designed to complement existing systems and serve as a bridge for units without an AIS or those awaiting fielding. DS2T is PC-based and provides the capability to read and write linear and 2-D bar codes, RF tags, and optical memory cards. It will also produce a military shipping label, an issue release/receipt document, a TCMD, and a packing list. There are three versions of DS2T: Sustainment, Unit Movement, and Direct Vendor Delivery.

• Satellite tracking systems provide the capability to determine the near real-time location of an asset. These systems are most commonly used to track vehicle location. They usually, but not always, rely on satellite communications. Satellite tracking systems also include two-way communications that allow rerouting of vehicles or whole convoys. The Army uses two satellite tracking sys-

tems. The Defense Transportation Tracking System (DTTS) is used to monitor shipments of sensitive conventional arms, ammunition, and explosives, and other sensitive, pilferable, hazardous, or high-value material moving from consignor to consignee within CONUS and Canada. This is done by hourly satellite positioning and coded/text messaging from equipped vehicles.

The United States Army, Europe (USAREUR) uses the Defense Transportation Reporting and Control System (DTRACS) to track sensitive cargo and selected convoy movement. Like DTTS, it provides redundant communications capability to units. DTRACS data from Europe updates the GTN via the USAREUR regional ITV server located in Germany. The Army's next evolution of tracking systems has been formalized with the creation of the Movement Tracking System (MTS) Program. MTS provides asset tracking and an added capability for the assistant driver to visualize, on a small color map, the position of his/her vehicle and other vehicles from the same unit.

Another form of satellite tracking called the Mobile Positioning Initiative is being demonstrated in USAREUR. This initiative combines several technologies to provide better asset visibility, command and control, and also convoy or single truck and trailer tracking. This new initiative has provided USAREUR the capability to look at the possibility to shrink the fixed RFID-fixed infrastructure, and to provide near real-time asset tracking of vehicles or trailers and the cargo that is on them.

Summary

The Department of the Army is committed to transforming its logistics business process through innovation and exploitation of technology. A key enabler of Army logistics transformation is AIT. Information gathered and processed through the use of AIT will span the entire product life cycle, from initial manufac-

turing through usage, and from maintenance cycles to reutilization or destruction. Effectively applied to Army logistics and sustainment operations, AIT can support a number of broad Army goals, including improving logistics productivity, reducing the battlefield logistics footprint, reducing total ownership costs, and increasing operational readiness.

JERRY D. RODGERS is a Senior Project Manager for Innovative Logistics Techniques Inc., McLean, VA, supporting the U.S. Army Logistics Integration Agency. He has more than 33 years experience in Defense acquisition, logistics, and technology. He has a B.S. degree in business administration from Northeast Louisiana University and an M.B.A. in logistics from the Florida Institute of Technology. In addition, he is a graduate of the U.S. Army War College and the Defense Systems Management College. Rodgers is a Certified Professional Logistician and former member of the Army Acquisition Corps.

JEFFERY D. FEE is a Logistics Management Specialist in the U.S. Army Logistics Integration Agency. He has more than 25 years experience in Defense transportation and logistics. He recently completed a tour as Operations Manager, Automatic Identification Technologies Branch in the USAREUR, Office of the Deputy Chief of Staff for Logistics, Logistics Automation Division. He is a graduate of the Non-Commissioned Officers Basic and Advanced Courses, and is working on a master's certificate in project management from The George Washington University.

THE ARMY MATERIEL RELEASE PROCESS

Brian Churchman

Introduction

The Army materiel release process represents a critical stage to ensure that our soldiers receive the best possible equipment to achieve their mission. Combat developers, materiel developers, and user commands all play key roles in the events leading to the juncture between identified need and fielded capability. The guidelines governing the materiel release process are in Army Regulation (AR) 700-142, *Materiel Release, Fielding, and Transfer* and the implementing procedures are in DA Pamphlet 700-142, *Instructions for Materiel Release, Fielding, and Transfer*. Both of these publications were recently rewritten to incorporate changes caused by revisions to the DOD-5000 series, the HQDA reorganization, and the latest directives regarding total package fielding.

Purpose

The materiel release process is intended to ensure that Army materiel is safe, meets operational requirements, and is logistically supportable before release to users. It is essential that all three of these provisions are met before items are provided to soldiers. To that end, the materiel release process provides the Army leadership with the control and visibility necessary to ensure that items intended for issue have been thoroughly evaluated from both operational and supportability standpoints. Those items that do not meet all of the requisite requirements are tracked through the Materiel Release Tracking System (MRTS) to ensure that identified issues or deficiencies are quickly resolved.

Materiel release is applicable to developmental, nondevelopmental, commercial-modified, and upgraded systems categorized as acquisition category (ACAT) I-III, to include software. It also applies to software revisions resulting from evolutionary development or pre-planned product improvement. However, software that is part of a new system or part of a hardware and/or firmware change is released as part of the prime end item release. There are exceptions to the materiel release requirement: materiel procured with nonappropriated funds; materiel developed for another Service, federal agency, or foreign government; and secondary items (Class 9)—spare/repair parts. Commercial construction materials, nonmilitary administrative items (file cabinets, word processors, etc.), and clothing and individual equipment are also exceptions. Special tools automatically assume the materiel release for the item that they support. A complete listing of exceptions can be found in AR 700-142, Paragraph 1.5.

Key Players

There are several key players in the materiel release process. They include the Army Materiel Command (AMC), its major subordinate commands (MSCs), and other supporting agencies; the Assistant Secretary of the Army for Acquisition, Logistics and Technology's (ASAALT's) Directorate for Integrated Logistics Support (ILS); materiel developers such as program executive offices (PEOs) and their respective program, project, and product management offices (PMOs); combat developers; and major commands (MACOMs).

MATERIEL RELEASE DEFINITION

Management Control Process To Ensure That A System Is Ready To Be Fielded And

- Meets Operational Requirements
- Is Safe
- Is Supportable
- Is Documented In MRTS

AR 700-142
DA PAM 700-142

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┌─────────────────────────────────────────────────────────────────────┐
│                   TYPES OF MATERIEL RELEASES                          │
│                                                                       │
│   • Full: Meets All Requirements                                      │
│                                                    ⎰‾‾‾‾‾‾‾‾‾‾‾‾‾‾⎱    │
│   • Conditional: Shortfalls                        ⎱ All ACAT Levels ⎰ │
│                                                    ⎱_____⎰      │
│   • Training: TRADOC Only                                             │
│                                         ┌─────────────────────────┐   │
│   • Urgent:                             │ AMC MSC Commander        │   │
│       - Emergency                       │ approves all releases    │   │
│       - Office Of The Deputy Chief Of   │ except where nonconcur-  │   │
│         Staff For Operations Directed   │ rence exists, then elevated│ │
│         Contingency                     │ to HQ AMC                │   │
│                                         └─────────────────────────┘   │
│   • Interim—Initial Brigade Combat Teams/FDD                          │
│                                                                       │
└─────────────────────────────────────────────────────────────────────┘
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The Army's materiel release authority is the AMC Commanding General, who delegates release authority to AMC MSC commanders. MSC commanders convene a Materiel Release Review Board (MRRB) to review and determine that all prerequisites for release have been met. Members of the MRRB include directors of the involved functional research and development elements, engineering and quality assurance personnel, software engineering personnel, logistics support and/or readiness personnel, the Command Safety Office, the Functional System Office (air defense, tactical vehicles, etc.), and any other functional offices deemed necessary. Additionally, the Army Test and Evaluation Command (ATEC) serves as the independent tester/evaluator and provides a position on operational effectiveness, suitability, and survivability for materiel release. Each AMC MSC has designated materiel release coordinators to assist PMOs in achieving materiel releases.

The ASAALT's Directorate for ILS serves as the Army's independent logistician and provides recommendations on release of Army ACAT systems and items (except for medical systems). The directorate provides continuous assessment throughout the acquisition process.

Materiel developers play a critical role as they plan for, fund, and ensure implementation, control, and documentation of the materiel release process.

Combat developers and trainers are responsible for providing the PEO/PMO/materiel developer an assessment of their ability to support the total materiel system concerning resident and nonresident instruction, extension training materials, and field manuals.

The MACOMs, however, may be the most important participants in the materiel release process. MACOMs assess the impact and acceptability of the systems proposed for release. They must accept the system by providing a signed Materiel Fielding Agreement. They also must verify that qualified personnel are available to operate and maintain the equipment and verify that facilities are available for that purpose.

Types Of Materiel Releases

Materiel releases fall into one of five categories: full, conditional, training, urgent, and interim. Full materiel release is given when the system meets all of its operational, safety, and suitability requirements (AR 700-142, Paragraph 3.7). A conditional release is given when one or more of those criteria that are deemed significant are not met. This requires a plan that addresses and tracks all conditions preventing a full materiel release. Training releases involve the release of materiel related to training only and are specific to Army Training and Doctrine Command (TRADOC) schools and training sites.

Urgent releases are given on an extremely limited basis under circumstances where an item is needed to meet an *immediate operational requirement*, such as a contingency operation. Interim materiel release (IMR) is a new concept that is currently covered by a policy memorandum signed by the Army G-4 in January 2001. The IMR policy was implemented to cover systems that are in the early development cycle (pre-Milestone C). It is currently limited to equipment provided to the Initial Brigade Combat Team and the First Digitized Division (FDD). Consideration is now being given to extend this

> The earlier the combat/materiel developer involves the Integrated Logistics Support experts in the development process, the fewer supportability issues will occur at the point of materiel release and subsequent fielding.

coverage to other eligible units as determined by HQDA.

The MRTS is an automated system used to track the status and forecast of materiel releases. The Army Electronic Product Support (AEPS) Office at Rock Island Arsenal, IL, maintains the MRTS, which is Web-based and password-protected. The AEPS Web site is at **http://aeps.ria. army.mil**.

Independent Logistician Role

As the "independent logistician," ASAALT's Directorate for ILS plays an important role throughout the materiel life cycle. The earlier the combat/materiel developer involves the ILS experts in the development process, the fewer supportability issues will occur at the point of materiel release and subsequent fielding. The independent logisticians can provide positive feedback on requirements documents such as Mission Needs Statements, Operational Requirements Documents, and Capstone Requirements. They participate as members of integrated product teams and are being considered for inclusion on integrated concept teams. They review supportability strategies and provide input for logistics considerations in acquisition strategies. They provide input for logistics initiatives such as performance-based logistics and provide feedback on the results of cost models used to determine support requirements.

The independent logisticians also provide input on the logistics demonstration aspects of test and evaluation master plans. They also monitor the execution of total package fielding and are involved in block upgrades development and fieldings. In short, one of the keys to successful materiel release is early coordination with independent logisticians and local materiel release coordinators.

Conclusion

The materiel release process encompasses many disciplines and is directly impacted by decisions made at the start of—and continuing through—the development process. It involves all elements of the Army—from the combat developers to the materiel developers to the user. In spite of the rigors of the process, it is important to keep in mind the ultimate customer—the soldier. The Army owes its soldiers fully compliant systems that have been granted full materiel release. When we do our part, the result is better for our troops.

For information or input to the process, contact Larry Hill, Directorate of the ILS Office, at DSN 223-0028, (703) 693-0028, or **Larry.Hill@ hqda.army.mil**; or Sally George, HQ AMC, at DSN 767-3171, (703) 617-3171, or **sgeorge@hqamc. army.mil**. You may also contact your materiel release coordinator. These points of contact are located at all AMC MSCs and the headquarters of ATEC, Army Forces Command, TRADOC, and the Military Traffic Management Command. A listing is in the MRTS, which is accessed via the AEPS Web site.

BRIAN CHURCHMAN is a member of the FY01 Competitive Development Group serving in the ASAALT's Directorate of ILS Office. He has a B.A. in history and a master's degree in public administration from Fairleigh Dickinson University. In addition, he is a graduate of the Army Management Staff College and completed the Advanced Program Management Course.

Logistics Integration Through Collaboration . . .

EMBEDDED DIAGNOSTICS AND PROGNOSTICS SYNCHRONIZATION

Dr. Miranda M. Keeney, Russel E. Rhoads, and Charles D. Taylor

Introduction

The Army vision for the 21st century is a rapidly deployable, highly mobile fighting force with the lethality and survivability needed to achieve a decisive victory against any adversary. To support this vision, the Army's logistics system must be versatile, agile, sustainable, and affordable. Army transformation is bringing about these fundamental changes in the Army's structure, equipment, and doctrine. Additionally, while the Army's science and technology, research and development, and procurement investments are focused on creating and fielding the Objective Force in the next 10 to 15 years, selected portions of the Legacy Force are being recapitalized to bridge the gap between today's Army and the Objective Force. The responsibility for sustaining today's force and the transforming Army is the business of the Deputy Chief of Staff, G-4 (DCS, G-4) (Logistics), who is also responsible for managing the Army's logistics footprint.

The Logistics Footprint

One of the Army's transformation goals is to reduce the logistics footprint of combat support and combat service support while enhancing the sustainability, deployability, readiness, and reliability of military systems. This requires new logistics processes and dramatic changes in current business processes to support the new force. These processes are focused on weapon systems and must be readiness-driven, lean, and agile. They must detect and correct problems early, allocate resources where they are most needed, and continuously reduce labor requirements and cost. One of the key enablers for the objective sustainment processes is to equip platforms with self-reporting, real-time embedded diagnostic and prognostic systems. This enabler promises to replace entire segments of the traditional logistics support structure. Such systems would contribute directly to the following key objectives for the future Army:

• Virtual logistics situational awareness at all levels,
• Proactive (versus reactive) combat logistics,
• Improved readiness for weapon platforms and support equipment,
• Reduced logistics footprint on the battlefield,
• More effective fleet management and reduced life-cycle costs, and

• Reduced logistics workload on the warfighter and crews.

Adding embedded diagnostics and prognostics capabilities to equipment and developing the infrastructure to generate maximum benefit from the prognostics data is a major challenge. The infrastructure needed to transmit, store, and use the information is complex, requiring changes to many existing and emerging communication and information systems. The potential application to thousands of Army platforms includes vehicles, aircraft, and marine craft. Therefore, an implementation strategy is needed that achieves maximum benefit with the resources available, recognizing that technology is continuously evolving. This strategy should answer the following questions:

• When, where, and how much diagnostics and prognostics capability should be developed and installed?
• What communications medium will be used to move the information?
• What technology do users need to move or use the information or data?

Sustaining the
TRANSFORMING Army
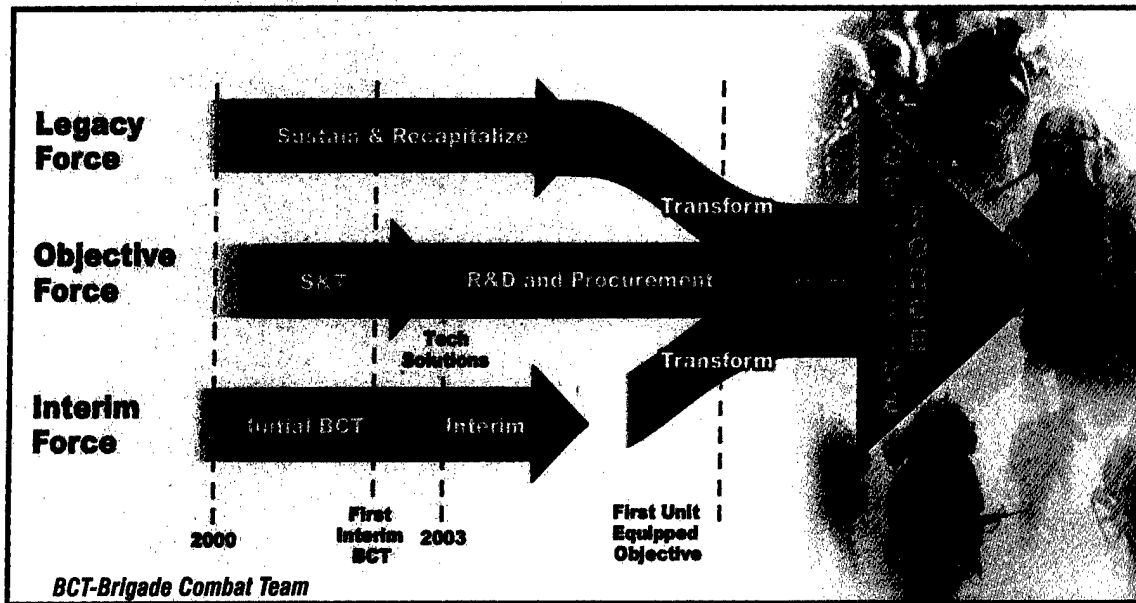
Responsive, Deployable, Agile, Versatile, Lethal, Survivable, Sustainable

- What policy and doctrine additions or changes will be required to support the Interim and Objective Forces?
- What requirements documents will be impacted?
- What are the funding implications related to the Program Objective Memorandum (POM)?

The Army leadership recognizes the importance of diagnostics and prognostics as transformation enablers and has directed that these enablers be considered for use on new and retrofitted equipment for several years. Unfortunately, funding limitations and detailed requirement specifications have delayed and inhibited their development and integration. However, changing operational concepts and emerging Objective Force requirements now make integration of these enablers a

necessity. Furthermore, the application of these enablers is expected to contribute significantly to the Army's logistics transformation by improving the Army's supply chain management of consumables, repairables, and the end items themselves.

Synchronization

There is a need to apply these embedded diagnostic and prognostic capabilities across the entire Army, employing communication systems and modifying information systems to make use of the new sources of information. The Army's diagnostics and prognostics community of combat developers, materiel developers, and logisticians has been working to achieve the Army Chief of Staff's goal of putting embedded diagnostics and prognostics on all weapon systems. This requires those systems that have historically been developed inde-

pendently to be synchronized to support an overall system-of-systems. Subsequently, the DCS, G-4 directed the U.S. Army Logistics Integration Agency (LIA), the Army's integrator of logistics systems and processes, to coordinate and synchronize these efforts under a project called Embedded Diagnostics and Prognostics Synchronization (EDAPS).

The EDAPS project is an overarching process that coordinates a unified Army strategy synchronizing the Army's current diagnostic and prognostic initiatives. The G-4 tasking calls for the LIA to pull together all the key diagnostic and prognostic players from across the Army and develop an end state that considers all the current diagnostic and prognostic pilots, programs, and plans and integrates the current programs and initiatives. The EDAPS project objectives include the following:

Embedded Diagnostics and Prognostics Synchronization ...

Tying the pieces together
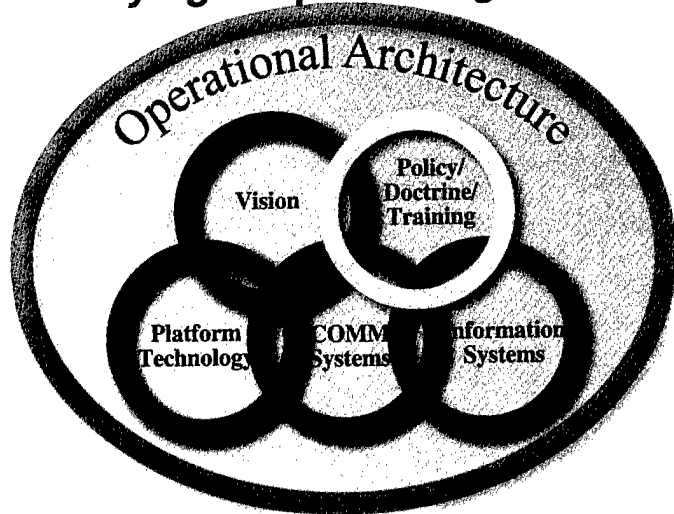
An overarching process to direct and coordinate a unified Army strategy with respect to embedded diagnostics and prognostics

• Identify Interim and Objective Force business processes;

• Influence the requirements of future operational and management systems such as the Global Combat Support System-Army, Wholesale Logistics Modernization Program, and the Future Combat Systems;

• Influence the requirements of weapon system platforms;

• Determine the best return on investments;

• Identify data requirements at all echelons;

• Identify policy and programmatic gaps and redundancies and define, and then re-engineer the operational architecture and its business processes from the platform, through retail, into the wholesale system; and

• Identify POM issues.

The project's scope of work includes the legacy fleets and the transformation to the Objective Force as outlined in emerging Army doctrine and Joint Vision 2020.

The LIA established a synchronization integrated product team (IPT) consisting of representatives from the Army's diagnostics and prognostics community. The team's first order of business was to define the operational architecture, develop a management structure that involved users at all stages of development to ensure coordination and integration, and establish a common vision for the logistics embedded diagnostic and prognostic processes.

The team's operational architecture will define the vision and identify requirements for policy, doctrine, and training; platform technology; communication systems; and information systems as the key pieces that need coordination and synchronization. An enterprise management framework approach was selected as the proposed management structure to ensure that all aspects of the oper-

ational architecture are considered. The approach is designed to engage key players in the information collection and analysis process and to build consensus for the path forward to the maximum extent possible. It also maximizes EDAPS' probability of success based on the complexity of the G-4 tasking.

The EDAPS team is synchronizing and coordinating Army diagnostic and prognostic issues across the entire business enterprise for the entire weapon system's life cycle, not just at the platform level. This includes a review of Army policy and regulations and in-depth assessments of related initiatives.

Requirements for embedded diagnostics and prognostics are being added where appropriate to Army operational requirements documents based on the EDAPS team's input. Finally, a collaborative framework of interrelated working groups, coordinated through a synchronization IPT, has been created to facilitate the process and manage the total enterprise. In this manner, a means has been made available for synchronizing policy, procedures, operations, doctrine, training, and automation requirements.

The supporting teams build on the work of the Army Diagnostics Improvement Program, which complements efforts focused on incorporating diagnostic sensors and readout mechanisms for Army weapon systems. The EDAPS process is expected to identify and document EDAPS' end-to-end information requirements (including tactical, nontactical, and strategic) for all users and develop a road map to describe how these requirements should be developed to support near-term, interim, and objective forces. It will also identify tactical, nontactical, operational, and strategic communication requirements that are primarily driven to address the information requirements for all

levels of field, depot, and national management activities. Finally, EDAPS will refine and define policy, doctrine, and operational architectures to ensure that all future requirements are reflected in appropriate policy, doctrine, procedures, automation, and training.

The synchronization IPT is responsible for assuring that the other working groups address the comprehensive breadth and depth of the issues involved in implementing embedded diagnostics, condition-based maintenance, and the linkages between these processes and relevant field, depot, and national information systems.

Summary

The coordination and synchronization of embedded diagnostics and prognostics for the Objective Force is critical to Army transformation because this technology impacts logistics operations at all levels—from maintainers to life-cycle managers. A wide range of Army organizations responsible for the doctrine, policy, equipment, training, funding, business processes, information systems, and communication systems will be affected by this technology.

It will take many years and substantial investments to fully implement the Army's vision for self-reporting weapon platforms and support vehicles with embedded diagnostic and prognostic capabilities. The project's development of a comprehensive operational architecture for generating, capturing, moving, storing, and using platform-based readiness information will greatly facilitate development of the common vision for platform-focused logistics processes.

Significant work remains to be done to develop a robust logistics system around this technology. Synchronizing these efforts is a major challenge. Although the DCS, G-4 tasked LIA to lead the synchronization effort, it is clear that this undertaking will be successful only if affected organizations are directly involved in defining the end state and developing the implementation road map. The EDAPS process allows for this coordination and synchronization to achieve the Army's vision of embedded diagnostics and prognostics in support of the Objective Force and will ensure that the process is institutionalized.

For more information about EDAPS, please visit the LIA home page at **http://www.lia.army.mil.**

DR. MIRANDA M. KEENEY is a Strategic Logistics Program Specialist in the Materiel Logistics Division of LIA and the Project Leader for the EDAPS Program. She holds a Ph.D. in industrial engineering and an M.S. in operations research from Penn State University. A graduate of the U.S. Army War College, she served there for a year as a Visiting Professor for artificial intelligence.

RUSSEL E. RHOADS is a Senior Program Manager with the Pacific Northwest National Laboratory working on the Army's EDAPS Program. He has a B.S. in physics and an M.S. in nuclear engineering from the University of Washington. For the past 15 years, he has led and contributed to programs helping DOD organizations modernize logistics systems and develop strategies for configuring, modernizing, and managing industrial operations.

CHARLES D. TAYLOR is a Logistics Management Specialist in the Materiel Logistics Division of LIA. He holds a B.A. from the University of Pittsburgh. Taylor is also a graduate of the DARCOM (now the Army Materiel Command) Intern Training Center's Materiel Maintenance Management Program and the Army Logistics Management College's Logistics Executive Development Course.

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Introduction

On Feb. 27, 2000, Paul J. Hoeper, then Assistant Secretary of the Army for Acquisition, Logistics and Technology, signed the following policy:

"The Department of the Army holds supportability to be co-equal in importance with the materiel development considerations of cost, schedule and performance. Accordingly, it is incumbent upon everyone involved in the acquisition and logistics processes to ensure that system supportability is fully addressed throughout the development, acquisition, fielding, and utilization of the system. AR [Army Regulation] 700-127, Integrated Logistics Support, provides Army policy on supportability planning and execution."

Public law and federal policies such as the Government Performance and Results Act of 1993 and the National Partnership for Reinventing Government (formerly known as the National Performance Review) require governmental agencies to develop strategic plans, performance measures, annual performance plans, and performance reporting procedures.

In keeping with the above guidance, it is imperative that a supportability performance measurement system be developed and implemented. The initial steps have been taken in the development of DOD and Army strategic logistics strategies. These documents contain strategic-level goals, objectives, and metrics such as optimizing cycle times, attaining a specific percentage of mission-capable rates, improving strategic mobility, implementing customer wait time, fully implementing joint total asset visibility, re-engineering and modernizing applicable logistics processes and systems, and reducing weapon system logistics support costs.

Performance Measurement

According to author and consultant H. James Harrington, "Measurement is the first step that leads to control and eventually to improvement; if you can't measure some-

MEASURING COST, SCHEDULE, PERFORMANCE, AND SUPPORTABILITY

Roger D. Hamerlinck

thing, you can't understand it; if you can't understand it, you can't control it; if you can't control it, you can't improve it."

Authors and educators have provided numerous models for use in developing and implementing a performance measurement system. Some of the more popular models are: *The Balanced Scorecard*, by Drs. Robert Kaplan and David Norton; *The Performance Pyramid*, by Kelvin F. Cross and Richard L. Lynch; and *The Supply-Chain Operations Reference Model*, by the Supply-Chain Council. Each of these models, while different in nomenclature and number of steps in the process, has similar characteristics. Each relates the measurement system to the organizational mission, vision, values, and strategy. Each identifies key success factors (KSFs), drivers, and enablers related to the organizational mission, vision, values, and strategy. Each defines the "few" critical performance metrics, or indices, that will serve as the best indicators of performance against the goals and objectives that were determined to be critical to success. Finally, each emphasizes the importance of continually re-evaluating performance measures and to taking corrective action as required. Although these authors recommend different formats and content, they all agree on the importance of combining these

characteristics into a performance measurement plan (PMP). The PMP is a tool that helps define and manage a performance measurement system.

Supportability

MIL-HDBK-502, *Acquisition Logistics,* defines supportability as "the degree to which system design characteristics and planned logistics support resources meet system peacetime and wartime requirements. Supportability is the capability of a total system design to support operations and readiness needs throughout the system's service life at an affordable cost. It provides a means of assessing the suitability of a total system design for a set of operational needs within the intended operations and support environment (including cost constraints)."

When integrated logistics support (ILS) management and supportability analyses are properly applied in the systems engineering process, the result should be a balance between the designs of the materiel system and the supportability structure. Balance is achieved by performing trade-off analysis and fact-based decisionmaking. The word balance is used to show the interrelationship and interdependency between cost, schedule, performance, and supportability. A performance requirement for a specified reliability level will

impact the cost, schedule, and supportability parameters of that same system. Therefore, trade-offs between these four elements are required to find the optimum mix of design, affordability, and supportability.

The ILS management process, as defined by AR 700-127, *Integrated Logistics Support (ILS)*, is characterized by 10 elements (see figure): maintenance planning; support equipment; supply support; computer resources support; manpower and personnel; facilities; packaging, handling, storage, and transporting; technical data; training and support training; and design influence.

Performance Metrics

The Army ILS Executive Committee concluded that performance metrics were needed for each of the ILS elements and provided a list of metrics that would indicate the level of performance for each element. This listing can be found in DA Pamphlet 700-56.

If each of the ILS elements is considered a KSF, then it is relatively easy to develop a basic supportability PMP. The benefit of such a format for the PMP is that it provides a complete map of the critical processes and their associated measures. It also complements the contents of several of the other program executive office and program management documents (i.e., Acquisition Program Baseline, Operational Requirements Document, Acquisition Strategy, Test and Evaluation Master Plan, Supportability Strategy, Program Work Breakdown Structure, Statement of

SUPPORTABILITY PERFORMANCE MEASUREMENT PLAN						
System: _____ Life Cycle Phase: _____ Decision Level: _____						
ILS ELEMENT	PROCESS OR ACTIVITY	PROCESS OWNER	PERFORMANCE MEASURE	DATA COLLECTION METHOD	FREQUENCY	LINK TO CRITICAL SUCCESS FACTOR
Maintenance Planning						
Support Equipment						
Supply Support						
Computer Resources Support						
Manpower and Personnel						
Facilities						
Packaging, Handling, Storage, and Transporting						
Technical Data						
Training and Support Training						
Design Influence						

Work, and Modified Integrated Program Summary).

Although most of the headings of the PMP are self-descriptive, a few require some additional comments. The *Life Cycle Phase* is important because the measures will change over the course of the life cycle. It is likely one would require a PMP for each phase of the life cycle. The *Decision Level* of the PMP refers to the strategic, operational, or tactical metrics. The selected *Performance Measure* will vary according to the decision level. Strategic-level metrics come from the DOD and Army strategic logistics strategies (i.e., a 20-percent reduction in the total ownership cost of a given system). Operational-level metrics come from program management documents and DOD and Army regulations and pamphlets (i.e., mean time between failure, order ship time, and administrative lead time/procurement lead time). The tactical-level metrics come from Army, major command, and major subordinate command regulations and policies (i.e., retail-level supply, maintenance, and transportation data).

Critical Factors

No single organization, individual, or manager can give attention to hundreds or even thousands of different performance measures. When there are multiple performance measures, they should be consolidated into groupings that cover a broader area. These groupings are called critical success factors (CSFs). These CSFs must be displayed so that management and employees can interpret them and react appropriately. Additionally, there should be no more than 6-12 CSFs.

An example of a familiar performance measurement system made up of CSFs can be found on the dashboard of a car. Drivers only need a few critical pieces of information to safely operate their vehicles. The fuel gauge, speedometer, engine gauge, odometer, and some key

Not only is measuring supportability required by law, it is sound business practice. The future success of the Army is dependent on achieving an acceptable mix between highly reliable designs and effective and efficient support structures.

warning lights provide this information.

A system's supportability performance is based on several CSFs. The focus is on seven performance metrics, an earned value graphic, and a list of "warning lights." The seven core supportability metrics are: availability/supportability, cost, schedule, technical performance, asset visibility, customer wait time, and manpower and personnel. Supportability cannot be fully measured by one single metric because balance is required. For example, if a 99-percent availability/supportability rate is reported, but that rate caused higher costs or additional manpower, a manager could begin to make informed decisions. Additional investigation might show that the 99-percent rate caused no increase in performance compared to a 97-percent rate. The manager must

decide if the increase in availability is worth the increase in manpower.

When the seven core metrics are visible, a manager can balance between them. The earned value graphic allows the manager to see the plan, to determine what performance has been against the plan, and to see future projections. The warning lights are used to indicate potential problems. For example, a late contract delivery that affects the schedule and cost may be a warning light. Another example might be when there has been a decrement in a specific appropriation impacting one of the supportability characteristics.

Conclusion

Not only is measuring supportability required by law, it is sound business practice. The future success of the Army is dependent on achieving an acceptable mix between highly reliable designs and effective and efficient support structures. As a reminder of how critical the issue of supportability is to mission accomplishment, consider the following rhyme: "For want of a nail, the shoe was lost; For want of the shoe, the horse was lost; For want of the horse, the rider was lost; For want of the rider, the battle was lost; For want of the battle, the kingdom was lost, And all for the want of a nail."

ROGER D. HAMERLINCK is a Senior Logistics Analyst with Logistics & Environmental Support Services Corp. working in support of the Deputy Assistant Secretary of the Army for ILS, Washington, DC. He holds a B.S. in business from Upper Iowa University and an M.B.A. from California Coast University.

ARMY IMPLEMENTATION OF PERFORMANCE-BASED LOGISTICS

Roger D. Hamerlinck

On April 1, 2002, Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASAALT) Claude M. Bolton signed a letter directing the Army to implement Performance-Based Logistics (PBL) on all acquisition category (ACAT) I and II programs where economically and operationally feasible. This action was taken to comply with guidance from the Quadrennial Defense Review; the FY03-07 Defense Planning Guidance; Change 1 to the DoD 5000.2-R, *Mandatory Procedures for Major Defense Acquisition Programs and Major Automated Information System Acquisition Programs*; and a Feb. 13, 2002, letter from the Under Secretary of Defense for Acquisition, Technology and Logistics.

So, what is PBL? The Office of the Secretary of Defense (OSD) defines PBL as "a strategy for weapon system product support that employs the purchase of support as an integrated performance package designed to optimize system readiness. It meets performance goals for a weapon system through a support structure based on performance agreements with clear lines of authority and responsibility."

Perhaps a simpler way of defining PBL is to say that PBL:

• Buys results not resources,
• Buys a solution or an outcome not process and methods, and
• Uses performance specifications not design specifications.

Finally, PBL is about transferring the responsibility for outcomes from the customer to the support provider. An important thing to note about the PBL methodology is that it applies equally to all providers: organic, contractor, or a partnership between the two.

All Program Executive Officers (PEOs) and Program Managers (PMs) of Army ACAT I and II programs, new and fielded (including subsystems and components), are required to assess their programs for the application of PBL. At this time, PEOs and PMs have the option of applying the PBL approach to ACAT III programs.

DoD 5000.2-R requires PEOs and PMs to identify a product support integrator from either DOD or the private sector. Activities coordinated by support integrators can include functions provided by organic organizations, private sector providers, or a partnership between organic and private sector providers. The PM is also directed to invite the military Service logistics activities and the Defense Logistics Agency to participate in product support strategy development and integrated product teams.

To determine the optimum product support concept, the PBL methodology should be applied against all elements of integrated logistics support (ILS). Supportability analyses should consider the following:

The ACAT. Currently, only ACAT I and II programs are required to evaluate their systems for PBL application. However, all ACATs *may* evaluate their system for possible PBL application.

The Commodity. The Army acquires and supports a wide variety of equipment. The PBL approach may not be appropriate in all cases. PEOs and PMs should consider the following:

• Will the equipment be issued to Table of Organization and Equipment (TO&E) or Table of Distribution and Allowances (TDA) organizations?
• Is the equipment a commercial off-the-shelf item or a full-up research and development item?
• Are there any safety, health, or other hazardous conditions created by operation or support?
• Are there any security issues involved with the operation or support?
• What is the technology refreshment period for this commodity, and how frequently does the technology change?
• Will the commodity be operated or maintained by military personnel?

Service Life. Where is the system in its life cycle? How much service life is remaining? Is there sufficient

service life left to get an acceptable return on investment or to affect a significant improvement on system readiness?

Systems Operational Requirements Document. After identifying the product support requirements and system performance requirements that impact ILS, can the PBL approach meet these requirements? Are there requirements that would be considered enablers or barriers to the application of PBL?

Statutory Limitations. Are there any legal limitations? Examples of statutory limitations include the logistics core competencies, depot maintenance workload, and competition between public and private organizations.

Regulatory Limitations. Would the application of PBL violate any current policies or Army regulations? These were designed to establish standard rules for the operation of logistics functions, such as maintenance, supply, transportation, training, and information technology.

A specific example within the category of information technology is the use of a Standard Army Management Information System (STAMIS). Would the application of PBL require a nonstandard information system?

Any actions taken under the PBL approach must be transparent to the field user and operate within standard Army systems and policies. Would contractor-on-the-battlefield policies be violated under PBL? Can the Army maintain total asset visibility of all assets under PBL initiatives? Does the PBL approach use standard distribution hubs?

Linking Requirements To Higher-Level Strategic Measures. The system-specific measurements must link with the Army and DOD strategic goals. These higher-level strategic plans outline performance metrics that should be considered when PEOs and PMs apply PBL.

The results of the supportability analyses and the recommended concept should be outlined in a business case analysis (BCA). The U.S. Army Cost and Economic Analysis Center validates the BCA.

The key documentation after the application of PBL is the Performance-Based Agreement (PBA). The PBA can come in many forms, i.e., Memorandum of Understanding or Agreement, Materiel Fielding Plan or Agreement, or the Performance Plan and Agreement (currently used in the Recapitalization Program). The number of PBAs can range from one (between the PM, the warfighter, and the Product Support Integrator (PSI)) to several (one between the PM and the warfighter; one between the PM and the PSI). The minimal contents of a PBA include but are not limited to:

• Identification of realistic, quantifiable, and measurable metrics;
• Identification of the roles and responsibilities of all stakeholders for the collection, processing, analysis, and reporting of performance data;
• Identification of the roles and responsibilities of all stakeholders for the planning, programming, and distribution of funds;
• Identification of the data and the source of the data to be collected;
• A description of the data elements and formula for calculating the critical metrics;
• A statement of the frequency and format for reporting results;
• A formal performance review;
• A formal dispute resolution process; and
• Signatures of each stakeholder indicating acceptance of the agreement.

The following are just a few of the numerous sources that can help in completing the analysis described in this article and in documenting the BCA and PBA:

• *Product Support for the 21st Century, A Program Manager's Guide to Buying Performance,* November 2001 at **http://www.acq-ref.navy.mil/reflib/1101pblguide.pdf;**
• The Office of Federal Procurement Policy, *A Guide to Best Practices for Performance-Based Service Contracting* at **http://www.arnet.gov/Library/OFPP/BestPractices/PPBSC/BestPPBSC.html;**
• The *Guidebook for Performance-Based Services Acquisition (PBSA) in the Department of Defense,* December 2000 at **http://www.acq.osd.mil/ar/doc/pbsaguide010201.pdf;**
• *Constructing Successful Business Relationships, Innovation in Contractual Incentives,* February 2001 at **http://acqnet.saalt.army.mil/library/final/finalfrm.htm;** and
• The DOD-sponsored *Business Case Model For The DoD Logistics Community: A Guide to Business Case Development,* September 1999 at **http://www.acq.osd.mil/log/logistics_materiel_readiness/organizations/lpp/assetts/product_support/final%20bcm.pdf.**

Additional assistance is available from Larry W. Hill or Roger D. Hamerlinck in the Army Secretariat's ILS Office, 103 Army Pentagon, Washington, DC 20310-0103.

ROGER D. HAMERLINCK is a Senior Logistics Analyst with Logistics & Environmental Support Services Corp. working in support of the Deputy Assistant Secretary of the Army for ILS, Washington, DC. He holds a B.S. in business from Upper Iowa University and an M.B.A. from California Coast University.

Introduction

Tactical Logistics Data Digitization (TLDD) is the collaboration of multiple information technology initiatives that will result in automating current supply and maintenance processes to reduce paper and clerical errors on the battlefield. TLDD serves as a digital capability to extract logistically significant data from weapon system platforms and then transmit that information into Standard Army Management Information Systems (STAMIS) such as the Unit Level Logistics System (ULLS), the Standard Army Maintenance System (SAMS), and eventually the Global Combat Service Support-Army (GCSS-A) and the Combat Service Support Control System.

TLDD is used in both a hardwire mode and, where appropriate, wireless linkage between STAMIS nodes. This digital capability moves logistics data requirements quickly, accurately, and efficiently while providing heretofore-unrealized logistics situational awareness to operational commanders. TLDD is considered a critical enabler for logistics transformation, supporting both prognostic and diagnostic efforts on the battlefield. TLDD is also an extension of the Joint Computer-Aided Acquisition and Logistics Support (JCALS) Program infostructure provided to platform operators and mechanics on the battlefield.

JCALS

With the Army as the executive agent, JCALS success stories include

TACTICAL LOGISTICS DATA DIGITIZATION

LTC Rory Kirker

the Navy's use of JCALS to rebuild the USS Cole after the terrorist attack on it several years ago, the Air Force's use of JCALS in the F-22 Program, and the digitization of more than 15,000 Army publications by the U.S. Army Materiel Command for increased efficiency. In support of TLDD, JCALS has already provided Electronic Technical Manual (ETM) readers to the Army Training and Doctrine Command schoolhouses. Further, in coordination with the Project Manager, Logistics Informa-

tion Systems, JCALS and TLDD will also provide ETM readers to mechanics as well as provide hand-held technology (i.e., personal digital assistants (PDAs)) to selected weapon system operators in support of GCSS-A.

Funded by an FY02 congressional plus-up to extend technical data to warfighters and tactical users, and to facilitate greater support and training to the user community, the JCALS Program Office was designated by the Program Executive Office, Enterprise Information Systems (PEO, EIS) to execute these funds. TLDD is an extension of the JCALS mission to provide authorized and current technical data in digital format to users. PEO, EIS, through the JCALS Program Office, appointed a Project Officer for TLDD who will ensure data conversion of ETMs from Portable Data File to eXtensible Markup Language (XML), develop a "point-and-click" integrated parts selection (IPS) and a Digital Log Book (DLB) capability to facilitate Digital Preventive Maintenance Checks and

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Services (DPMCS), and develop an Electronic Technical Manual-Interface (ETM-I) functionality. These resources will allow authorized operators and maintainers to digitally requisition spare and repair parts through IPS and move these requests digitally to STAMIS ULLS and SAMS virtually free of clerical errors. Ultimately, TLDD will link operators and maintainers to the retail and wholesale logistics systems through the World Wide Web.

Ideally, the transmission of logistics data will happen wirelessly from as far forward of the Brigade Support Area as the Combat Repair Team and operator locations.

Data Transmission

DLB/DPMCS, ETM-I, and the wireless transmission of logistics data have been successfully demonstrated at the 46th Corps Support Group (CSG), Fort Bragg, NC. In addition, ETM-I has been integrated into the wireless Combat Service Support Automated Information System Interface network within the Stryker Brigade Combat Team at Fort Lewis, WA. The catalyst behind these concepts was the need for the Army to provide a diagnostic capability to isolate and troubleshoot mechanical faults, to provide an automated capability to process maintenance fault data to requisition parts through ULLS-Ground (ULLS-G), and to create and process digital work orders through SAMS-1. Additionally, there was a need to evaluate a variety of hardware solutions to perform fault diagnostics, generate and perpetuate data, and determine the use of wireless technologies to distribute maintenance data.

Digital Interface

To accomplish these objectives, the U.S. Army Logistics Integration Agency (USALIA) developed and employed a digital interface between the mechanic and ULLS-G/SAMS-1 referred to as ETM-I. ETM-I is a non-intrusive software interface between the U.S. Army's ETMs and Interactive-ETMs (I-ETMs) and the ULLS-G

and the SAMS-1. ETM-I allows Army mechanics to input maintenance faults and identify required repair parts from the ETM/I-ETM as well as transmit parts requests and maintenance information in an automated manner.

ETM-I provides operators and mechanics an interface to enable them to point and click on a part number or National Stock Number to electronically create a parts demand and forward the requisition to either ULLS-G, SAMS-1, or, in the future, to GCSS-A for processing. Using ETM-I reduces clerical errors, supports DA Form 5988-E updates, streamlines the unit requisition process, and decreases fault entry time.

Within the 46th CSG, the 503rd Maintenance Company has been equipped with ETM-I, SAMS-1, and ULLS-G; and the 546th Transportation Company has been equipped with ETM-I and ULLS-G. The benefits of ETM-I are reflected in the Class IX requisition history for the 546th Transportation Company before and after receiving ETM-I and ULLS-G. From August 1999 through July 2000, using the traditional requisition process, 405 requisitions were submitted. Of those, 53 requisitions (13 percent) were for the wrong part. In the following year (August 2000-July 2001), with the implementation of ETM-I, 1,004 requisitions were sub-

mitted, with only 10 incorrect requisitions (1 percent). This clearly demonstrates the significant improvement and benefit in processing Class IX requisitions offered by ETM-I and ULLS-G.

Use Of PDAs

The use of hand-held DLB technology such as PDAs to perform preventive maintenance checks and services (PMCS) is also being evaluated. DPMCS is the automation of the maintenance checks and services process defined in TM-10 manuals and performed by operators, combined with the DA Form 5988-E information, to record faults and repair parts requirements for a piece of equipment. This is done using a PDA. The PDA displays the correct PMCS for the respective model of the bumper number vehicle, all open parts requests, all open faults, the next service due (type, date, and miles; kilometers or hours), and the recorded usage.

The PDA also allows updates. As the operator performs the PMCS, if a fault is noticed, the operator may add the fault with little or no keystroke entry. Upon completing the PMCS, the information is transferred through the ETM-I to ULLS-G for processing. To date, the PMCS checklists for High Mobility Multipurpose Wheeled Vehicles, Light Medium

> **As stated in FM 3-0, CSS, like all other battlefield operating systems, is commanders' business, and is an enabling operation that generates and sustains combat power.**

Tactical Vehicles, Family of Medium Tactical Vehicles, and Heavy Expanded Mobility Tactical Trucks have been converted for use on the PDA device.

The Combined Arms Support Command is sponsoring a Concept Experimentation Program (CEP) for performing PMCS using a PDA device. The 546th Transportation Company has been taking part in the CEP. In June 2001, the U.S. Army Test and Evaluation Command Operational Test Command Coordination Office conducted a data collection/evaluation at the 546th while the unit was operating in a field environment. An advantage of using PDA devices is that the soldier can review the PMCS table and update the information contained in the DA Form 5988-E simultaneously. This ensures that soldiers execute a complete PMCS and increases information flow and accuracy, which leads to a quicker update of DA Form 5988-E. The successful demonstration of the TLDD concept at Fort Bragg is the first step in Army implementation of this concept.

Ideally, the transmission of logistics data will happen wirelessly from as far forward of the Brigade Support Area (BSA) as the Combat Repair Team and operator locations. There are several systems being reviewed by various agencies within the Army to make this a reality. To help determine the most effective approach, USALIA recently completed a study titled *Tradeoff Analysis for Combat Service Support Wireless Communications Alternatives*. This study identified combat service support (CSS) communications connectivity requirements, compared available wireless technologies that could be implemented to meet these requirements, conducted an evaluation of those technologies to determine which are most feasible and cost-effective, and provided a report with recommendations to interested parties. USALIA then held a CSS Wireless Communications Workshop to bring interested parties together to make recommendations to the Army leadership. While those recommendations are under review, a proof of concept demonstration of how logistics data can be moved wirelessly was conducted at Fort Bragg. Instead of moving logistics data with paper documents and/or magnetic diskettes, the data were successfully moved wirelessly using satellite and cellular phones via PDA from the operator platforms through the mechanic and supervisor using ETM-I to the ULLS-G, SAMS, and Standard Army Retail Supply System.

Additionally, at Fort Lewis, ETM-I has been successfully integrated into the Wireless Combat Service Support Automation Information System

Interface. This has reduced clerical errors, the number of paper DA Forms 2404 and 5988-E, and excess repair parts. Additionally, it has eliminated lost high-priority parts requests and the ordering of wrong parts and has increased turnaround time. Enabling logisticians to do this beyond the BSA and as far forward as likely combat repair team/operator locations is the next challenge and one that the recommendations from the above-mentioned communications workshop seeks to address.

Conclusion

As stated in FM 3-0, CSS, like all other battlefield operating systems, is the business of commanders, and is an enabling operation that generates and sustains combat power. CSS characteristics, as defined in FM 3-0, are responsiveness, simplicity, flexibility, attainability, sustainability, survivability, economy, and integration. The TLDD concept supports all of these characteristics. Once implemented, the TLDD concept will contribute at the unit level to the Army G-4's transformation charter to reduce the CS/CSS footprint in the combat zone and reduce the cost of logistics without reducing warfighting capability or readiness.

LTC RORY KIRKER is a Project Officer, Future Logistics Division, U.S. Army Logistics Integration Agency. He has a B.A. degree from the University of Arizona, an M.A. degree from Pepperdine University, and recently completed the Senior Officer's Course at the NATO Defense College, Rome, Italy. He has more than 26 years of enlisted and commissioned service and is a member of the Ordnance Corps.

The annual Secretary of the Army Awards for Excellence In Contracting ceremony was held June 26, 2002, at Fort Myer, VA. Claude M. Bolton Jr, Assistant Secretary of the Army for Acquisition, Logistics and Technology, presented the awards. James Inman, Acting Deputy Assistant Secretary of the Army for Policy and Procurement, and MAJ Jeannette Jones of the Total Army Personnel Command, presided over the ceremony.

The Army contracting awards are presented to commend exemplary contracting organizations and individuals. This Armywide award honors excellence and leadership in a variety of contracting activities. Specifically, the award recognizes excellence in customer satisfaction, productivity, process improvement, and quality enhancement. Hard work and dedication have placed these winners in an elite status.

Nominating Process

This year, 71 nominations were received. A letter requesting nominations is usually issued at the end of the current fiscal year, and the ceremony is normally held the following spring. Nomination packages are endorsed by the nominee's major command (MACOM) Principal Assistant Responsible for Contracting (PARC), the program executive officer, or another appropriate official. There is no limit on the number of nominations that may be submitted. However, when more than one nomination is submitted by a MACOM, the PARC will rank order the nominations in a specific category before submitting them to the Department of the Army. An evaluation board, consisting of senior-level contracting personnel, convenes and then reviews and evaluates all selection packages and reconvenes for the final award determination.

Awards

This year, recipients represented nine commands: the U.S. Army Forces Command (FORSCOM), the U.S. Army Forces Southern Command (USARSO), the U.S. Army Defense Contracting Command-Washington (DCC-W), the U.S. Army Tank-automotive and Armaments Command (TACOM), the Defense Contract Management Agency (DCMA), the U.S. Army Aviation and Missile Command (AMCOM), the U.S. Army Pacific Command (USARPAC), the U.S. Army Contracting Command Europe (USACCE), and the U.S. Army

CONTRACTING EXCELLENCE AWARDS

Communications-Electronics Command (CECOM). A list of the FY01 award recipients follows.

Unit/Team Awards

• *Unit/Team Award For Systems Contracting*
Recipient: Brigade Combat Team Acquisition Division, Warren, MI, (TACOM)
• *Unit/Team Award For Specialized Contracting*
Recipient: The Simplified Non-standard Item Acquisition Program (SNAP) Team, Warren, MI, (TACOM)
• *Unit/Team Award For Installation-Level Contracting Center*
Recipient: The Directorate of Contracting, Anniston Army Depot, Anniston, AL (TACOM)
• *Unit/Team Award For Installation-Level Contracting Satellite*
Recipient: The Directorate of Contracting, Fort Dix, NJ (FORSCOM)

Outstanding Contracting Officers

• *Outstanding Contracting Officer (Military) At Installation-Level Center*
Recipient: CPT Erwin Rivera, USARSO, Fort Buchanan, Puerto Rico
• *Outstanding Contracting Officer (Civilian) At Installation-Level Center*
Recipient: Katherine Williams, Army Atlanta Contracting Center, Atlanta, GA (FORSCOM)
• *Outstanding Contracting Officer (Military) At Installation-Level Satellite*
Recipient: CPT Jean R. Chausse, Directorate of Contracting, Fort Campbell, KY (FORSCOM)
• *Outstanding Contracting Officer (Civilian) At Installation-Level Satellite*
Recipient: David M. Lipeles, Devens Reserve Forces Training Activity, Fort Dix, NJ (FORSCOM)
• *Outstanding Contracting Officer (Military) In Specialized Contracting*
Recipient: MAJ Joy N. Kollhoff, DCC-W, Falls Church, VA
• *Outstanding Contracting Officer (Civilian) In Specialized Contracting*
Recipient: Mary Lou McCullough, TACOM, Warren, MI

• *Outstanding Contracting Officer (Military) In Systems Contracting*
Recipient: LTC James W. Norris, DCMA, Lockheed Martin, Dallas, TX
• *Outstanding Contracting Officer (Civilian) In Systems Contracting*
Recipient: Carol Cooper, AMCOM, Redstone Arsenal, AL
• *Outstanding Contracting Officer (Military) In Contingency Contracting*
Recipient: CPT Mark A. Johnson, USARPAC, Fort Shafter, HI
• *Outstanding Contracting Officer (Civilian) In Contingency Contracting*
Recipient: Cheryl L. Jones, USACCE, Wiesbaden, Germany

Professionalism In Contracting Award

• *Secretary of the Army Professionalism In Contracting Award (Civilian)*
Recipient: Michael R. Kelemen (CECOM), Fort Monmouth, NJ

Secretary Of The Army Award For Exceptional Support Of The Javits-Wagner-O'Day (JWOD) Act Program

The JWOD Program is one of the most important programs that the Army uses to help blind and severely disabled people. This award recognizes commands, installations, or activities that successfully initiate significant additions of products or services to the Procurement List of the Committee for Purchase from People Who Are Blind or Severely Handicapped.
Recipient: James Edwards, Directorate of Contracting, Fort Lewis, WA (FORSCOM)

The Department of the Army and the Office of the Deputy Assistant Secretary of the Army for Policy and Procurement were delighted to recognize the performance of outstanding contracting professionals and organizations and encourage all commands to continue to support this prestigious recognition of Army contracting personnel. Nominations for FY02 awards may be submitted online at **https://apps.rdaisa.army.mil/saaec/awards.htm** from October through December 2002.

The preceding article was written by Edna Taylor-Capers, a Procurement Analyst in the Office of the Deputy Assistant Secretary of the Army for Policy and Procurement.

Introduction

Army installations represent a large, long-term investment in infrastructure and personnel critical to sustaining military readiness and power projection. Over the past few years, however, many Army installations have had to adjust or constrain their mission activities because of "outside-the-fence-line" conflicts. Noise, safety, dust, air and ground traffic, water and air quality, and water supply have surfaced as concerns by communities that are rapidly "encroaching" on our military assets. Often when communities express these concerns, installations make adjustments such as the following: ranges are moved away from boundaries; air traffic hours and zones of operation are reduced; bombing ranges are moved or even shut down; and night operations are reduced or eliminated (despite the need for troops to be ready to support night firing in theater situations). Cumulatively, these seemingly small adjustments are taking a toll on Army mission readiness.

Significant media attention has been devoted to urban and suburban growth that impacts the sustainable use of military facilities. In 1999, the California legislature passed the Defense Retention and Conversion Council Act, in part to facilitate planning interactions between communities and military installations. In 2000, the Senior Readiness Oversight Council (SROC), the senior mission readiness planners for the military Services, identified several specific encroachment concerns that affect DOD operations:

- Threatened and endangered species habitat protection,
- Urban and suburban growth near installations,
- Increased competition for electromagnetic frequencies,
- Airspace conflicts,

TECHNOLOGIES TO HELP INSTALLATIONS PLAN ACROSS FENCE LINES

William D. Goran and Brian M. Deal

- Protection of marine mammals and potential impacts of mission-related underwater noise,
- Unexploded ordnance dangers,
- Air quality,
- Weapon and air traffic noise, and
- Community interaction.

These concerns reflect the types of issues that potentially limit military installation operations. The issues may stem from public laws that protect habitats within installation boundaries or from activities that occur outside the installation boundaries but affect mission activities (e.g., use of protected frequencies or conflicts between civilian and military air flight routes). Whether military mission constraints result from legislated protection of on-post resources or from concerns about the impact of noise, dust, and fire on neighboring communities, the combined impact of these issues has significantly reduced military training and testing operations on military lands. Yet our forces must conduct

sufficient testing and training to maintain readiness. We must begin to proactively protect our current training and testing facilities.

Sustainable Planning

Traditionally, installations have planned for facilities and activities within their fence lines without extensive coordination of plans with surrounding communities. Recent guidance from DOD (*Sustainable Planning; A Multi-Service Assessment*, 1999) concludes that sustainable development is most successful when military and civilian communities cooperate to leverage resources and avoid and mitigate conflicts.

The Army and other Services encourage collaborative planning and revise planning guidelines and regulations to reflect a stronger focus on sustainable planning, which includes joint planning between communities and installations. To successfully accomplish joint planning, installations and communities need access to accurate data, successful planning techniques,
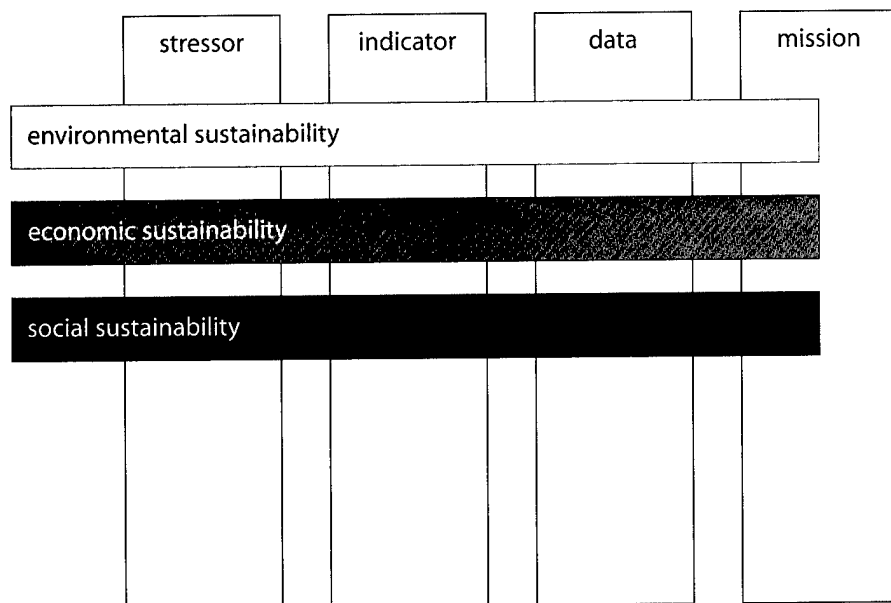
The SRA System

scenario analysis tools, planning experts, and the knowledge retained from others who have undertaken similar efforts. These requirements are the focus of the sustainability, encroachment and room to maneuver (SERM) technology initiative of the Engineer Research and Development Center (ERDC) Construction Engineering Research Laboratory (CERL) in Champaign, IL. This technology initiative represents a "lands analysis" component of the Fort Future capability discussed in the May-June 2002 issue of *Army AL&T*.

Technology Requirements

What technologies facilitate joint planning between installations and communities? Key requirements include:

• The ability to understand past trends and to project these trends and additional "plans" into possible future scenarios;
• An improved understanding of the relationships between community actions (e.g., zoning approval for new subdivisions near installation boundaries) and potentially affected

military operations (e.g., range operations or air flight routes);
• An improved ability to identify, analyze, portray, and project the requirements for and condition of transportation resources (rail, air, road, and port) that have joint use by communities and installations;
• Easily accessible data sources and techniques to acquire, review, portray, and analyze data relevant to land and airspace uses, and other relevant resources, both within and beyond installation boundaries; and
• Easy access to mitigation approaches and "lessons learned" from other installations and communities addressing joint planning challenges.

In addition to these installation-specific requirements, the military Services need to understand relative "risk" to mission activities across all their installations. These risks include the cumulative impact across multiple installations that support specific mission activities (e.g., the combined risk to the multiple installations that provide facilities for weapon testing) or multiple installations in certain regions.

Technology Solutions

The goal of sustainable planning involves developing capabilities that focus these requirements into a manageable decision support tool. The effort focuses on providing technologies to help military planners at multiple levels address across-the-fence-line sustainability and planning issues. The organizing principal of the sustainable planning effort involves sustaining a military installation's mission by determining and ultimately mitigating its environmental, social, and economic risks. The process includes assessing risks associated with the sustainability of the economic, environmental, and social systems in the area; analyzing the change-inducing policies and drivers for input into a spatial and dynamic modeling environment to discover "what-if" land-use change scenarios or alternatives; and assessing the effect of those scenarios to determine the plans and policies needed to implement the most desirable scenario.

This effort has resulted in several useful resources such as historic trends analysis and protocols; an assessment of risks; spatial and dynamic modeling; and impact assessments within a military land-use planning model. Each is described in more detail below.

Trends And Protocols

Urban growth maps are effective visual aids that highlight historic trends that can be a source of conflict and threat to continued training activities on military lands. A historic urban growth series is composed of cartographic illustrations that depict the changes in land use around an installation. This visual presentation quickly conveys the potential for conflicts as the separation between military lands and the neighboring community disappears. Trend analysis is a powerful tool for

*Associated with the visualization
of probable land-use changes
is the "So what?" question.
What do modeled scenario results mean?*

showing the changing conditions around an installation.

Risk Assessment

The primary goal of this research was to identify and evaluate risks to military lands resulting from exogenous effects of local area economic and physical growth. Demographic, economic, and land-use data were gathered and examined as potential risk indicators. Several data summarization levels and spatial scales were evaluated to determine if different risk assessments might be derived, and to suggest monitoring approaches for continuing assessment.

A product of this work is the development of the sustainability risk assessment (SRA) tool. SRA is a systematic, objective, and hierarchical approach to measuring the risks to military installations. It is an objective approach because it draws on national, regional, and local installation spatial data. SRA is used to examine these spatial hierarchies using environmental, social, and economic domains as organizers. (See figure on Page 33.) Indicators based on metrics within the hierarchies are then developed around factors such as land, energy, and water within the domains.

Spatial And Dynamic Modeling

The military land-use and impact assessment model (mLEAM) is a simulation modeling environment that describes land-use changes across a landscape (inside and outside the installation fence line). These changes result from the spatial and dynamic interaction among economic, ecological, social, and control systems in the region.

The mLEAM uses a spatial modeling approach to illustrate the drivers of land-use change and the associated environmental, economic, and social impacts of the modeled changes. This approach is important in developing policy scenarios that can help mitigate the conflicts between inside- and outside-the-fence-line interests.

Associated with the visualization of probable land-use changes is the "So what?" question. What do modeled scenario results mean? By using the results of the mLEAM Model scenarios and a sensitivity analysis, researchers can develop a dynamic factor analysis of SROC criteria that captures the impact indices related to installation/community interactions. This methodology enables critical analysis of each policy scenario for its overall environmental impact.

Status

The tools discussed in this article are under development at ERDC-CERL, while the alpha application of the tools is underway at Fort Benning, GA. Initial analysis suggests that encroaching community development is beginning to impact Benning in the following ways: There are demands for threatened and endangered species protection, reduced military economic impacts in the region, and physical land-use changes at the border. The analysis will help improve the mission viability of Fort Benning by uncovering the potential conflicts with neighboring community development plans.

Conclusion

In the future, military installations will need to work closely with their surrounding communities to avoid and manage conflicts and to improve resource sharing. Installations and communities will also need to work together to "sustain" installation mission activities. The Army and the other Services are developing policies and guidance for installation managers to "plan across their fence lines." In cooperation with researchers in the other Services and agencies, ERDC is developing the tools, techniques, and data models to help address these complex across-the-fence-line planning and management requirements.

WILLIAM D. GORAN is Director of Special Projects at ERDC-CERL in Champaign, IL. He holds a B.A. in English rhetoric; an M.S. in geography; and a master of extension education in agricultural extension/soil science, all from the University of Illinois at Urbana-Champaign. Goran is Project Leader for the Army's Land Management System development.

BRIAN M. DEAL is a Registered Architect at ERDC-CERL, where he focuses on issues of sustainability, encroachment, and simulation modeling. He has completed a master's degree in architecture and is nearing completion of a doctorate in urban and regional planning at the University of Illinois after spending 12 years in private practice.

HOMELAND DEFENSE

A New Mission For The Army's Research, Development and Engineering Centers

Dr. Mohamed Athher Mughal, Karen Quinn-Doggett, Nicholas Yura, and Gregory Mrozinski

Introduction

Six days before the September 11, 2001, attacks, former Sen. Sam Nunn (D-GA) testified before the Senate Foreign Relations Committee on the "Dark Winter" Exercise, noting that America "was vulnerable to biological terrorism." Recent events have heightened national concern over chemical and biological (CB) terrorism. Yet the threat is not new.

In March 1995, members of the Japanese cult Aum Shinrikyo attacked the Tokyo, Japan, subway system with sarin nerve agent. The incident captured international headlines and sensitized world leaders to the threat of CB terrorism. Recognizing this threat, the 104th Congress of the United States passed Public Law (PL) 104-201, the *National Defense Authorization Act for Fiscal Year 1997*. This law provided for weapons of mass destruction (WMD) preparedness training for civilian first responders. DOD's experience in defending against CB warfare agents prompted the wording in Section 1415 of PL 104-201: "The Secretary of Defense shall develop and carry out a program for testing and improving the responses of Federal, State and local agencies to emergencies involving biological and chemical weapons and related materials."

In support of DOD, the U.S. Army Soldier and Biological Chemical Command (SBCCOM) established the Domestic Preparedness Program (DPP) in 1997. Through the DPP, SBCCOM provided WMD preparedness training to more than 28,000 civilian first responders in 105 communities nationwide. In October 2000, the civilian portion of the

DPP was transitioned to the Department of Justice's Office of State and Local Domestic Preparedness Support. Concurrently, SBCCOM established a new Homeland Defense Business Unit (HLDBU).

HLDBU

The HLDBU has the overall mission to enhance the response capabilities of military, federal, state, and local emergency responders to terrorist incidents involving WMD. The business unit integrates three functional areas: WMD installation preparedness, technical assistance, and military improved response. Each of these areas builds on the experientially proven foundation of the DPP and fully leverages the technical expertise of the Army Materiel Command's designated CB Research, Development and Engineering Center (RDEC), the Edgewood Chemical Biological Center (ECBC).

Installation Preparedness

The WMD Installation Preparedness (IP) Program is a field-tested and proven method for preparing military installations to respond to asymmetric attacks involving chemical, biological, radiological, and nuclear (CBRN) weapons. The program is conducted with mobile teams that go to the installation, thus promoting synergy and interoperability among the military and civilian responders on the installation, as well as the mutual aid counterparts in the local, state, federal, and host-nation communities.

The IP process consists of six components that encompass assessment,

training, planning, exercising, technical assistance, and sustainment (Figure 1). The command and staff workshop provides installation leaders an overview of the IP Program and helps them develop an awareness of WMD incident consequences and their attendant effects on the mission. The baseline assessment consists of a chemical weapons tabletop exercise that gives the installation an opportunity to identify its basic strengths and weaknesses with regard to WMD emergency response. The assessment also provides a baseline against which the installation can measure improvements in response preparedness. Installation emergency responders are then offered up to six courses that provide comprehensive instruction on the WMD threat, recognizing signs and symptoms of CBRN material exposure, proper detection and identification, protection and decontamination techniques for handling CBRN materials, and medical management of casualties.

Next, ECBC WMD experts work with installation leaders to review and refine existing installation response plans. Technical assistance compliments previous planning and training by filling any technical voids that may exist. Examples of technical assistance include WMD vulnerability assessments of facilities, equipment surveillance and maintenance, and testing and equipment consultations. At this point, a CB tabletop exercise is used to validate and refine planning efforts. Finally, a capstone effort—a chemical weapons field exercise—is conducted to test all or selected aspects of the installation's WMD response plan. This exercise

provides a practical means to assess whether an installation's WMD response plan is executable in an effective, coordinated, and timely manner.

The WMD IP Program, or portions thereof, have been successfully conducted at the Fort Bragg Army Base, NC; Pope Air Force Base, NC; the Pentagon DiLorenzo Clinic; and in several Coast Guard districts.

Technical Assistance

The Technical Assistance Team (TAT) was formed in October 1999. The TAT has four primary missions: fixed site/building protection; nuclear, biological and chemical (NBC) testing services; customized rapid prototyping; and WMD dissemination device awareness training.

Both civilian and military facility managers consider buildings and fixed sites potential targets for NBC WMD attacks. The TAT provides a "life-cycle" menu of services that can provide varied levels of protection for any new or existing building or fixed site. These services include the following: assessing and identifying site vulnerabilities; providing immediate, short-, mid-, and long-term protective solutions through customized procedures and hardware; developing technical specifications for protective solutions; preparing and conducting operational and certification tests; and developing follow-up maintenance recommendations and conducting ongoing testing to maintain the full functionality of protective solutions. The recommended solutions are all developed taking into account the available resources of the customer.

Realizing the importance of effective NBC protection equipment, the TAT conducts performance evaluations of first responder protection equipment, along with protection equipment of the DOD Services. Using chambers that can generate simulated chemical agent environments, the TAT has evaluated devices ranging in scope from single-person suits to the M1 Abrams tank. The team also maintains performance and operational methodologies and facilities to perform evaluations of commercially available detection and protective equipment for first responders. Items tested include Occupational Safety and Health Administration (OSHA) Level A and B suits; National Institute for Occupational Safety and Health (NIOSH) cer-
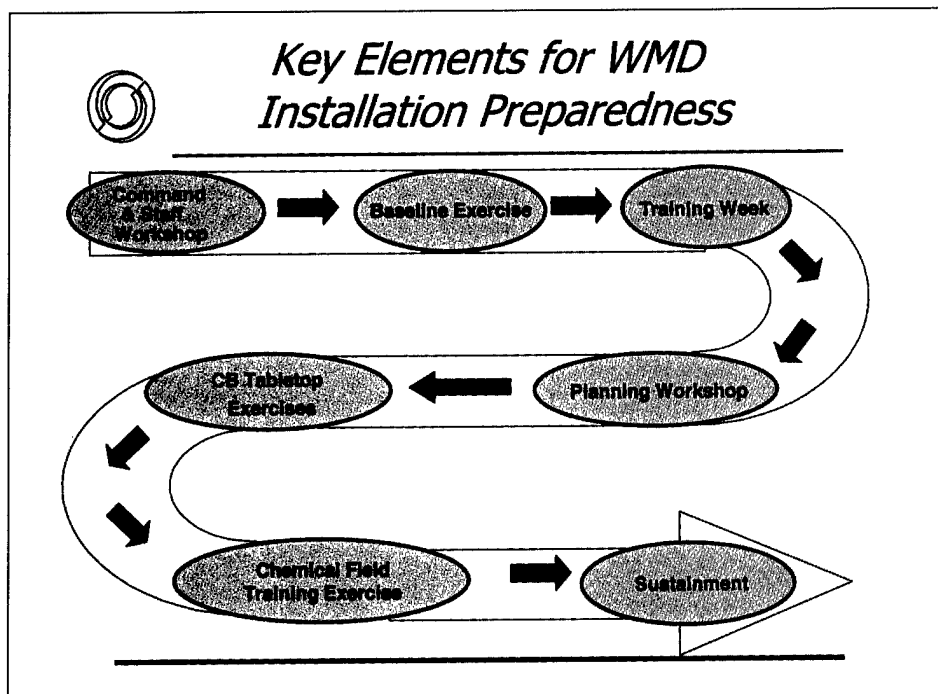
Figure 1.

tified respirators; self-contained breathing apparatus (SCBA); organic vapor detectors; and protective boots and gloves. Using standardized methodologies, the TAT evaluates the equipment and posts the results on the SBCCOM HLDBU Web site as a technical data resource for the entire response community.

Sometimes the perfect protective solution does not exist. In these cases, the TAT can construct rapid design solutions and pre-prototypes that meet unique customer needs. In this "skunkworks" environment, the TAT led the effort to fabricate 12 mobile analytical laboratory systems and train 10 civil support teams. Because of their in-
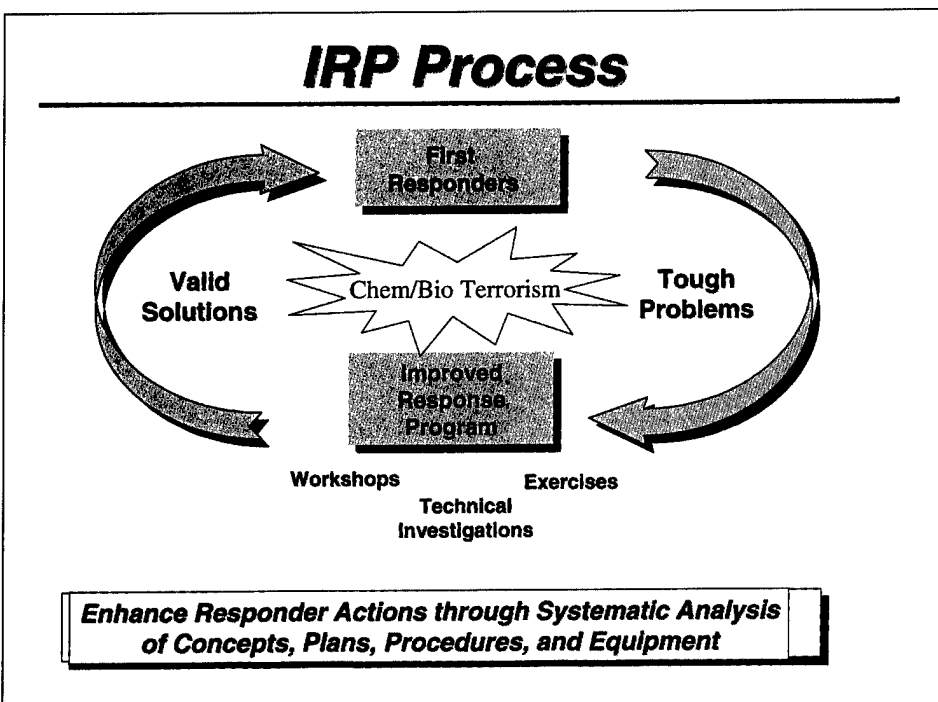
Figure 2.

depth technical experience with NBC equipment, the TAT also offers basic and advanced training on the potential characteristics of WMD dissemination devices for senior-level to first-responder personnel, along with related basic and advanced electronics training courses. In keeping with the HLDBU's designation as a "business unit," the TAT's expertise and services are available to military, civilian, and commercial clients.

MIRP

The Military Improved Response Program (MIRP) leverages expertise acquired through the DPP to enhance DOD's response to CB terrorism. Using a systematic process (Figure 2), the MIRP has identified, analyzed, and solved a number of pressing CB response problems including the following: mass casualty decontamination techniques; firefighter clothing protection requirements in chemical agent environments; personal protective equipment requirements for law enforcement and emergency medical personnel; generic medical response templates to handle the potentially massive number of casualties from a CB attack; and an integrated response template for biological incidents.

MIRP representatives are presently partnering with representatives of response communities within the various Services. Teams are organized into four functional groups: health and medical; fire and hazardous materials; law enforcement; and fatality management. In addition to the MIRP's CB technical experts, each group maintains a cadre of experienced and practicing response professionals in its functional specialty. The MIRP's approach is to use these groups to conduct analytical workshops focused on overall and specific response issues. The objectives of these workshops are to identify, assess, and prioritize response needs; develop, test, and evaluate response improvement concepts; and to enhance cooperation between military and civilian response communities.

The health and medical group is working to refine the medical components of the biological response template by designing an integrated set of alternative medical facilities that provide for flexible expansion of a local medical infrastructure. The fire and hazardous materials group is developing operational recommendations and performing additional equipment testing in support of crews that may need to respond to CB incidents. The law enforcement group is defining the role and conduct of criminal investigations for CB terrorism, including the harmonization of the criminal and epidemiological investigations. The fatality management group is partnering with the civilian medical examiner and public health communities to determine how military resources can best support the management of mass fatalities. They are also working with military mortuary affairs organizations to help develop a commander's guide for mass fatality management.

Conclusion

SBCCOM continues to leverage the expertise and lessons learned from its intensive 4-year DPP through its new HLDBU. In those 4 years, SBCCOM partnered with and trained more than 28,000 civilian first responders and emergency managers in 105 cities, providing them response solutions that they could use to improve their overall preparedness for CB terrorism. By working directly with first responders, SBCCOM was able to train to real-world response needs in a practical, customer-focused manner.

In addition to providing these tangible benefits to our country's civilian and military responders, the success of the DPP and the HLDBU highlight another important fact: the Army's RDECs are valuable national resources that can provide broad-based benefits beyond the military community. The enormous success of the DPP specifically underscores how Army scientists and engineers can effectively partner with federal agencies as diverse as the FBI, the Federal Emergency Management Agency, the Department of Health and Human Services, the Environmental Protection Agency, and the U.S. Department of Agriculture. Considering the practical benefits of such partnerships, the ECBC feels privileged to continue working on its many critical homeland defense efforts.

DR. MOHAMED ATHHER MUGHAL is a Member of SBCCOM's Military Improved Response Program. He has more than 17 years of experience researching and analyzing chemical and biological warfare and terrorism. He has published on bioterrorism preparedness and his research papers and findings have been presented at conferences nationwide. Mughal holds a B.S. in chemical engineering, an M.S. in engineering management, and a Ph.D. in public policy. He is also a branch-qualified Army Chemical Officer and an honors graduate of the U.S. Army Chemical School.

KAREN QUINN-DOGGETT is a Physical Scientist at SBCCOM. She has more than 20 years of experience in the U.S. Army's Chemical and Biological Defense Program, most recently in weapons of mass destruction preparedness. Quinn-Doggett has a B.S. in earth science/geology and an M.B.A. She received the U.S. Army R&D Achievement Award for Technical Achievement in 1984 and the Commander's Award for Civilian Service in both 1999 and 2000.

NICHOLAS YURA is Team Leader of the Technical Assistance Team, which is part of the Homeland Defense Business Unit at SBCCOM. He was most recently involved in research and development efforts regarding the maturation of advanced chemical vapor filtration systems. He holds a B.S. in chemical engineering.

GREGORY MROZINSKI is Team Leader and Program Manager for the Military Improved Response Program at SBCCOM. Previously, he served as the Operations Team Chief for the U.S. Army Chemical Treaty Compliance Office, where he directed day-to-day operations of arms control inspections at chemical weapons storage and former chemical weapons production sites. Mrozinski has a B.S. in mineral engineering and chemical metallurgy from Columbia University and a bachelor's degree in liberal arts from York College of Pennsylvania.

Lessons For Contingency Contracting ...

HUMANITARIAN ORGANIZATIONS IN UZBEKISTAN

CPT John L. Coombs and
CDR E. Cory Yoder

One of 25 pallets of medical supplies donated by Heart to Heart International being offloaded at the Tashkent International Airport on Dec. 15, 2001.

Introduction

Our world has changed, and stability operations are being used more frequently and in an ever-increasing number of places. The success of these operations, however, is critically dependent on contingency contracting officers (CCOs). These individuals are usually the first ones to deploy to countries in crises, often in austere conditions.

Unfortunately, CCOs usually deploy on stability operations with little or no experience in dealing with the myriad of contracting considerations unique to the local environment. Private Volunteer Organizations (PVOs), in contrast to most CCOs, have often worked in the region for long periods. PVOs are nonprofit humanitarian assistance organizations involved in development and relief activities. Unlike other nongovernmental organizations (NGOs), PVOs have not applied for nor received consultative status with the U.N. Economic and Social Council. More than 26,000 NGOs and PVOs spend between $9 and $10 billion annually assisting 250 million people.

PVOs contract, perform market research, and coordinate with other regional and in-country participants. PVOs understand the socioeconomic and market forces affecting contracting and provide a useful model for contingency contracting. PVO methods of training, empowerment, and networking, if applied to contingency contracting, can improve performance, conserve funds, and mitigate risk.

One of the authors of this article, John L. Coombs, interviewed CCOs deployed to Uzbekistan (located in Central Asia) and members of several PVOs. The purpose was to analyze Heart to Heart International and Samaritan's Purse. Coombs accompanied Heart to Heart International on an airlift of $2.3 million in medical supplies to Uzbekistan in December

2001. Heart to Heart International is a Kansas-based humanitarian organization that focuses on medical aid to developing nations, regions in crisis, or areas that have experienced natural disasters. Samaritan's Purse is a major relief organization that provides a wide range of humanitarian aid worldwide including disaster response and refugee assistance. The author observed Heart to Heart International's negotiations with the Department of State, Uzbek officials, businesses, and other PVOs.

PVOs appoint project managers who control all aspects of the humanitarian operation, including procurement, and can improve the responsiveness of contingency contracting because of the following:

• Project managers are grown; they have hands-on, forward-deployed training.
• Project managers are financially empowered; they have full control of the purse.
• Project managers network; they cultivate contacts with numerous PVOs.

PVO Project Manager Development and Training. PVOs "grow" their project managers, carefully preparing them to assume full control of an operation. Project managers begin as team members, then become assistants, and prove themselves during several humanitarian missions before assuming control. This preparation provides the project manager with a thorough understanding of the environment's capacities, capabilities, and business customs essential for success. Guidelines for conducting operations are loosely written, intentionally deferring authority and discretion to the project manager, allowing for maximum flexibility and responsiveness. When minutes count, hours are not squandered seeking approval from an office 12 time zones away.

In contrast, CCOs receive one 2-week course on contingency contracting—CON 234. They may know the procurement process, but if this is

their first deployment, they probably have little experience with foreign cultures and immature contracting environments. Contingency contracting training can be improved through three methods:

• Send select CCOs on temporary duty (TDY) (to a contingency operation area) for 2-6 weeks after completing CON 234;
• Send select CCOs to internships with PVOs operating in areas where the officer is likely to deploy; and
• Develop training simulations and scenarios for inclusion in CON 234.

Personnel and funding shortfalls are barriers to implementing internships or TDYs. Therefore, additional training should be limited to a select few CCOs to maximize returns. A specific qualification code can be assigned to officers completing the training. This qualification can be used to determine the best CCO to deploy.

Financial Empowerment. The project manager of a PVO has full control of funding and the authority to negotiate and quickly commit resources without requesting approval from higher authority. Extensive training and past experiences provide the project manager with the skill and judgment to successfully carry out these responsibilities.

This same delegation and control over funding, if granted to CCOs, will provide the flexibility to better support the task force during the initial, chaotic days of a deployment.

Executive Order (EO) 10789 gives the agency secretary the ability to delegate authority for purchases under $50,000 to whomever necessary in the interest of national defense, greatly enhancing financial and contractual empowerment of the CCO. (EO 10789 authorizes agencies of the government to exercise certain contracting authority in connection with national Defense functions and prescribes regulations governing the exercise of such authority.) This additional

authority should be temporary—only until the operation stabilizes—and does not relieve the CCO of requirements to properly account for funds.

Despite the obvious benefits, the full power of EO 10789 is rarely applied. Leaders must shift from risk avoidance to risk management and mitigation. The benefits of empowerment outweigh the limited risk of granting CCOs control of purchases under $50,000. Careful selection of CCOs demonstrating financial accountability, reliability, sound judgment, and thorough training will mitigate the risks of financial empowerment.

Networking. Before PVO personnel depart the United States, they network with other organizations, contacting PVOs already operating in the region and U.S. government agencies like the United States Agency for International Development and the U.S. Embassy.

Deploying CCOs should contact PVOs prior to deployment, collecting market information to incorporate into procurement planning and coordinating operations where warranted. CCOs can locate NGOs and PVOs operating in an area via ReliefWeb (**http://www.reliefweb.int/w/rwb.nsf**) or InterAction (**http://www. interaction.org**). Proper coordination and cooperation can assist the CCO in providing cost-effective and efficient support to forward contingency operations.

Similarities
Although military forces and PVOs may seem different at first glance, they do have similarities. Members of both groups value service, dedication, and self-sacrifice. Often they have the same objectives; the route to those objectives may differ, but the destination is the same.

PVOs and military forces also have funding similarities. The measure of fiscal success for PVOs, like the military, is to expend funds efficiently, effectively, and responsibly to accomplish the mission. Effective stewardship of funds is essential for

continued contributions and/or funding.

The environment for both groups is also typically austere, and goods and services are scarce. The security threat may be high. Essential tasks are similar for military forces and PVOs. Both organizations use available personnel, equipment, and supplies to accomplish tasks rather than produce products, and both are assigned to remote locations with minimal logistical support and rapidly stage to conduct operations.

Procurement under these conditions presents similar challenges for both PVOs and military forces. Because of these similarities, humanitarian organizations have developed procurement methods that the military can successfully incorporate. They are outlined below and contrast with CCOs.

Policy And Doctrine

Presidential Decision Directive (PDD) 56 directs government agencies to better coordinate the U.S. response to foreign crises. PDD 56 requires the military to work with civilian agencies and international organizations. Joint Publication 3-08, *Interagency Coordination During Joint Operations*, Volume 1, encourages cooperation with PVOs, noting they have information "essential to the success of the military operation," including the needs of the population, culture and practices, historical perspective, local politics, security threat, and capabilities of the government.

The Joint Warfighting Center's *Joint Task Force Commander's Handbook for Peace Operations* also encourages coordination with PVOs. The handbook adds that PVOs are aware of railheads, storage facilities, and freight-handling firms that could prove invaluable to logistics planners.

The Army Federal Acquisition Regulation Supplement Manual Two, *Contingency Contracting*, notes that local culture and business practices have a considerable impact on contracting. It lists PVOs as organizations that CCOs "may require interaction with," but it does not elaborate on the nature or purpose of PVO interaction. It appears that although policy and joint doctrine have recognized that PVOs can provide valuable information, this concept has not been effectively incorporated into contracting guidelines.

A Need For Cooperation

CCOs arrive in immature contracting environments with minimal market information. PVOs can provide CCOs essential market data, including but not limited to wages paid for translation services, prices for consumable supplies and construction materials, availability of contractors, warehousing and transportation sources, contractor past performance, local business and banking locations, cultural norms, and influential government officials.

A 1996 study by the Center for Naval Analyses—titled *Logistics and Engineering Requirements for Humanitarian Operations*—found that contingency contracting procedures often lead to artificially inflated prices when the military and PVOs bid against each other. This prices PVOs out of the market, increases the cost of U.S. deployments, and inhibits relief efforts. According to the study, price inflation remains after the military leaves and continues to hinder NGO/PVO procurements. If CCOs had a means of interacting with PVOs prior to negotiating procurements, artificial price inflation could be reduced. Suppliers that encourage bidding wars could be identified and avoided.

Joint Doctrine

Joint Publication 3-57, *Joint Doctrine for Civil-Military Operations*, explains that civil-military operations "establish and maintain positive relations" between U.S. forces, multinational forces, the host government, PVOs, and influential civilian businesses.

The primary means to interact with PVOs during stability operations is via a civil-military coordination cell. At the task force level, this is the Civil-Military Operations Center (CMOC). The CMOC is the conduit for coordination between the military force, the United Nations, the host nation government, and PVOs. The CMOC is located within the secure perimeter of the task force, away from sensitive areas, and close to an entry/exit point to easily admit visitors. The contracting cell should be located adjacent to the CMOC, giving CCOs ready access to PVOs. In addition to exchanging information with PVOs, CCOs could capitalize on their proximity to civil affairs officers—perhaps the only other segment of the military continually interacting with the local populace—to exchange information gathered on local businesses, the local culture, and socioeconomic conditions.

Conclusion

The world is ever changing. The CCO must be successful to ensure the needs of the operational commanders are met. Training similar to what PVOs receive, financial and decision-making empowerment, and capitalizing on the PVO's experience base will dramatically improve the efficiency and effectiveness of the contingency contracting officer.

CPT JOHN L. COOMBS, U.S. Army, is a Student in the Acquisition and Contracting Program of the Graduate School of Business and Public Policy, Naval Postgraduate School, Monterey, CA. Previously, he served 11 months in Bosnia-Herzegovina as the Civil-Military Liaison for the 1st Armored Division's Aviation Brigades.

CDR E. CORY YODER, U.S. Navy, is a Lecturer for the Graduate School of Business and Public Policy at the Naval Postgraduate School. He has an M.S. in management from the Naval Postgraduate School and an M.A. in national security and strategic studies from the Naval War College.

Author's Note: This article is based on an interview conducted in March 2001 with BG Donald F. Schenk, former Program Manager (PM), Brigade Combat Team (BCT), while he served as the Deputy for Systems Acquisition, U.S. Army Tank-automotive and Armaments Command (TACOM). It also incorporates data from the Army Acquisition Lessons Learned Web site and database (http://www.acquisitionll. leavenworth.army.mil).

Requirements Generation On A Fast Track . . .

THE INTERIM BRIGADE COMBAT TEAM/INTERIM ARMORED VEHICLE

George J. Mitchell

Introduction

In a speech during the October 1999 meeting of the Association of the United States Army (AUSA), Army Chief of Staff GEN Eric K. Shinseki announced that we would be moving to a new 21st century Army. Shinseki said we will prioritize solutions that employ smaller, lighter, more lethal, yet more reliable, fuel-efficient, and more survivable options. He was very confident in saying that he believes the Army could go to an all-wheel vehicle fleet where the follow-on to existing armored vehicles could come in at 50- to 70-percent less tonnage.

Flash forward to November 2000 when then Director of the Army Acquisition Corps LTG Paul J. Kern announced a contract award for the Interim Armored Vehicle (IAV)(now called "Stryker") to General Motors/ General Dynamics Land Systems (GM/GDLS) Limited Liability Corp. Measured against history, this contract award for development and initial production of a family of 10 combat vehicles was made in a remarkably short period of time. An intense effort was needed by both combat and materiel developers to define and document a requirement and to award a contract to deliver equipment against that requirement. This article focuses on the development of the requirement for the Interim Brigade Combat Team (IBCT)/IAV and the environment in which this requirement came to fruition.

Communications Effort

To convert Shinseki's transformation comments into a requirement and ultimately a contract for a family of combat systems in only 13 months—and to deliver the first article only 16 months after that—several important concurrent activities had to drive the process. This oftentimes resulted in reversing the relationship of requirements generation and acquisition planning. The combat and materiel developers had to initiate an immediate public communications effort by briefing industry and clearing the "minefields" laid by those who—even today—publicly disagree with the Army vision of what is really needed for 21st century warfighting. An operational requirements document (ORD) had to be written and approved, and an effective and logically seamless (given the constraints of time) working relationship between the combat and materiel developer had to be established.

The public debut of the requirement by the Chief of Staff at the October 1999 AUSA meeting was followed by a *Commerce Business Daily* (CBD) announcement less than 1 month later outlining the initial framework within which the acquisition would proceed. This CBD announcement described the broad intent of the acquisition, the role of Fort Knox, KY, in hosting the market survey, and the focus event of an Industry Day in December 1999. It was issued without a requirement or an ORD supporting it and, therefore, might have been "dead on arrival" in an earlier time. But *this* CBD announcement had support! In fact, it had been vetted through congressional staffers prior to being finalized and guided through the approval process by a general officer. As the PM, BCT noted in March 2001, relative to lack of an articulated requirement, "Everything was on the table except for contracting out the Army."

In December 1999, as with all TACOM procurement contracts, the Army held an advance planning briefing for industry to discuss the requirement. This formal Army interaction with industry on this subject included three presentations. The U.S. Army Training and Doctrine Command (TRADOC) Systems Manager gave a presentation on the Operational and Organizational Plan; a Fort Knox representative discussed the Platform Performance Demonstration that would be conducted in January 2000 and serve as the market survey; and the PM, BCT described to the extent possible the wide-open nature of the program, answering questions on requirements, schedule, funding, contracting, and support strategies, even though there was little definition at that time.

Although government information on the IBCT/IAV requirement definition was sparse, the media continued commenting on the IBCT/IAV. Because few specifics were addressed, the media began its coverage with a requirements debate that centered on a systems-based discussion of wheels versus tracks, building up the furor created by GEN Shinseki's speech in October. Further, the media took the view that the military was attempting to shift from the capabilities that made it successful during the Gulf War and moving toward "thin-skinned" vehicles that would endanger America's soldiers because of reduced vehicle armor protection. Unfortunately, because the Army was slow to shape the media's view at the outset, story lines were established early by the press and continued for 14 months, even during the contract decision announcement. In addition, when the contract award was protested, the Army was slow to address the media comments again, thereby allowing the media and the protesting party to set the tone and conditions for debate. In total fairness, the Army could do little else because of not wanting to revert to litigation—it was doing all it could to keep the protest within the formal Government Accounting Office channel. Any public outcry by the Army would necessarily have worked to its

disadvantage should the protest enter federal judiciary litigation.

The ORD

The initial draft Request For Proposal (RFP) was released in December 1999 without benefit of anything like an ORD. Because of schedule constraints, only a draft ORD was available when the system specifications and second draft RFP were prepared in February 2000. While the PM, BCT continued communications with industry in such forums as the annual AUSA meeting, and while the rest of the Army drew support, long and intense hours were spent developing the ORD. Elements of the ORD were developed at TRADOC schools, and the ORD was consolidated at TRADOC Headquarters. A significant step in the ORD's development was a 3-day general officer review at Fort Monroe, VA, at the end of January 2000.

The ORD was developed with only the necessary, relevant criteria to ensure the Army was provided the capability identified by the warfighter. Never before had such intense effort gone into deliberately linking the Operational and Organizational Plan to the ORD. The resulting document was one that was intended to produce a platform-enabled soldier, not a soldier using a platform.

The final ORD contained only five key performance parameters (KPPs) because the Army did not want to be overwhelmed by a large number of parameters against which a multiple vehicle system proposal would be evaluated. The limited number of KPPs prompted varying reactions. There were those who argued that because of the multiple variants of the basic system, the source selection process would be overwhelmed by the number of criteria needing to be tracked. Others adamantly insisted that the small number of KPPs did not allow for sufficient evaluation board flexibility as well as a distinction between proposals. All of this had to be balanced against a non-KPP requirement that commonality was more important than individual platform performance because of the need to deliberately address supportability at the same level as performance, schedule, and cost.

The accelerated program schedule that required the quick drafting of the ORD also resulted in quick development of system specifications. This expedited process could have resulted in differences in interpretation of specifications had it not been for multiple, line-by-line reviews by the PM, BCT; the TRADOC Systems Manager; and senior requirements and acquisition leaders.

Questions were still raised regarding what was being acquired and what was the philosophical purpose behind the acquisition. Despite any perceived controversy over its purpose, the ORD affirmed the focus of the PM, BCT and the acquisition itself, that of providing warfighting capability to a new organization.

"No Air Gap"

Of huge significance to the entire BCT effort was the continuing opportunity for materiel developer (the PM) involvement when the requirement documents were prepared. The PM's presence allowed for questions and responses related to such issues as testing criteria and government-furnished equipment integration. The opportunity to be present paid huge dividends for the PM and the program. Unlike most past experiences in recent memory, this acquisition broke new ground in combat and materiel developer collaboration.

Although the critical importance of the relationship between the PM and the combat developer is apparent now, the TACOM Commanding General made this close relationship an explicit requirement for the PM. Besides "casting a wide net" in pursuit of solutions to the requirement, the PM was to allow "no air gap" between himself and TRADOC. Given the short window of time that the PM had, it was absolutely essential that those responsible for developing the ORD and those managing the acquisition were actively and continuously linked. The connectivity obviously impressed those observing the fluidity of the combat and materiel developer interaction because they commented that they appeared to be "joined at the hip."

Conclusion

This program will not be the last one "fast-tracked." To provide systems to the warfighter that meet known or unstated requirements in a reasonable timeframe (as with the IBCT/IAV), the acquisition community must be expeditious.

Although the BCT Program Management Office communicated openly with potential contractors up through contract award, it was limited by the lack of information it had to pass on to industry, especially at the outset of the program. PM, BCT made up for this by asking industry to provide its good ideas and comments. In that regard, PM, BCT was literally building a bridge to the future while walking on it! Unfortunately, in the eyes of many, the absence of a concerted campaign telling the Army's story about the role of the IBCT or the significance of the IAV as the principal equipment component of these new formations so integral to Army transformation negatively influenced the government-media relationship and the published articles. It is important that each program office work with other program stakeholders as well as the media in shaping the message that it wants delivered. To secure the required resources, each program office must shape Army opinion about its program and the system to be delivered.

The success of the early efforts of the IBCT/IAV combat and materiel development was first realized in a contract award to procure equipment. This success was clearly linked to the inseparable, purposeful actions of the combat and materiel developers and the professionalism of the Army acquisition workforce within each Army Materiel Command buying activity; research, development and engineering center; the Army Test and Evaluation Command; and the legal office that supported the acquisition. These key activities are directly responsible for these first steps in the Army transformation.

GEORGE J. MITCHELL is an Acquisition Management Specialist assigned to the Acquisition Branch of the Center for Army Lessons Learned (CALL). He has a B.S. from the U.S. Military Academy and an M.A. in business from Webster University. He is a participant in the Defense Leadership and Management Program and an Army War College student.

AAC HOSTS ANNUAL TRAINING WITH INDUSTRY ORIENTATION WORKSHOP

Cynthia D. Hermes

Introduction

On July 18, 2002, the Army Acquisition Corps (AAC) hosted its annual Training With Industry (TWI) Orientation Workshop in Springfield, VA, to acquaint 11 new participants with all facets of the TWI Program. Among the attendees were two outgoing TWI participants, representatives from several participating industries, and senior personnel from both the Acquisition Support Center (ASC)—which reports to the Office of the Assistant Secretary of the Army for Acquisition, Logistics and Technology—and the U.S. Total Army Personnel Command's (PERSCOM's) Acquisition Management Branch (AMB).

Program Background

The Army's TWI Program is a 1-year work-experience training opportunity that takes selected officers out of their military environment and exposes them to the latest civilian business practices, organizational structures and cultures, technology development processes, and corporate management techniques. The result is an invaluable opportunity to broaden one's career and to strengthen technical competency, problem-solving skills, and leadership abilities. Commercial participants in the TWI Program are developers of innovative, cutting-edge technologies or established business leaders in their respective fields.

Opening Remarks

Orientation host Jim Welsh, the ASC's AAC TWI Program Proponency Officer, began the workshop with an agenda overview and introduced COL Mary Fuller, ASC Director and Deputy Director for Acquisition Career Management. Fuller congratulated the new TWI Program participants and noted that officers selected for the program are the "best of the best" and that participating industries are receiving some outstanding individuals. She also encouraged the participants to contact her if they had any comments or questions they might like conveyed to the Assistant Secretary of the Army for Acquisition, Logistics and Technology or to his Military Deputy. Additionally, she called on TWI Program participants to explain to industry what the Army's about, what transformation is about, and to explain the value of Army/industry teaming efforts. Although the TWI Program is a great opportunity for Army personnel to understand how industry functions, Fuller stated that the program is also designed to explain to industry how the Army does business. She encouraged everyone to maintain contact with their industry counterparts when their TWI assignments are completed. Fuller concluded by urging TWI participants to inform their fellow officers about the value of the TWI Program.

Personnel Management Issues

LTC James E. Simpson, AMB Colonel Assignments Officer, spoke on behalf of new AMB Branch Chief LTC Peggy Carson, who joined the workshop later during the morning session. Simpson discussed personnel management issues such as key acquisition relationships, organizations, and functions; selection board dates and recent results; career timelines; Officer Evaluation Reports (OERs); Individual Development Plans (IDPs); and certification and AAC membership procedures. Additional guidance was provided on Academic Evaluation Reports and their importance in the promotion process in comparison to OERs. Said Simpson, "Ultimately, the best manager of your career is you."

Ethical Considerations

Al Novotne, Director, Standards of Conduct in HQDA's Office of The Judge Advocate General, provided guidance on ethics and standards of conduct. He discussed rules regarding receipt of gifts from TWI hosts, what constitutes a gift, gifts from prohibited sources, and disposal of improper gifts. He also addressed unauthorized commitments, supplementation of salaries, proprietary information, employment negotiations, and copyrights and patents. He concluded by reminding the participants that, as trainees, they are not official Army representatives and cannot make commitments on behalf of the Army.

Personal Perspectives

FY01 TWI participants CPT(P) Ramona McCaa and MAJ Rich Lonardo provided personal perspectives on their recently completed TWI assignments. In particular, they offered some lessons learned to the new program participants. In addition, they provided insight on how the events of September 11, 2001, impacted their industry hosts.

McCaa termed her experience with Raytheon Systems Co., Tucson,

AZ, as "great," adding that she enjoyed working in an environment that helped her develop as a professional acquisition officer. Concurrently, she learned about industry business cultures and contract-execution processes that she will take back to the Army acquisition community.

Assigned to Raytheon's Joint Standoff Weapons (JSW) Program—a joint Navy and Air Force program—McCaa indicated that the events of September 11 definitely impacted her TWI experience. For example, following that date, Raytheon held a major meeting on how best to expedite the production of missiles related to the JSW Program. Additionally, all TWI participants were required to send a detailed weekly itinerary to the U.S. Army Student Detachment (USASD), Fort Jackson, SC. (This was later changed to a monthly requirement.) USASD is a personnel action center for inprocessing, outprocessing, financing, civil schooling, tuition, and textbooks. McCaa noted that USASD personnel were extremely helpful to her and should also be of great assistance to the new TWI participants.

McCaa concluded by offering the following suggestions to the new trainees: become familiar with your company's acronyms because they are different from the Army's acronyms, learn as much as you can, volunteer for assignments that others don't want, get to know your team-mates and be a team player, and stay busy.

Next, Lonardo detailed his TWI experience with the General Motors (GM) Truck Group, Pontiac, MI. He said the opportunity to participate in the very competitive automotive industry was a great experience. Like McCaa, he noted that the events of September 11 also impacted his industry assignment. For example, shortly after September 11, GM established a slogan and market plan to "Keep America Rolling." As part of this strategy, GM also created a finance plan to help energize America's economy.

Lonardo's lessons learned included the following: determine if your corporation has professional development requirements for its employees; let your supervisors know exactly what you need to get the job done; understand the language in the corporate world—learn their acronyms and get away from the Army's; submit your training plan to your boss within 2 days of your arrival because everything that you do during the next year—whether going on temporary duty (TDY) or going to school—must relate to your training plan. He also advised new participants to get a strategic perspective of their company—find out where it is now, where it was in the past, and where it expects to be in the future; observe positive and negative practices; take advantage of formal in-house training; and maintain Army mentorship so they can best apply their TWI experience in the future.

Lonardo further recommended that participants read the book *The Prodigal Soldier*, which traces changes in DOD's acquisition process from Vietnam up to Desert Storm. He also recommended trainees read at least one book about their company. He concluded by reminding everyone to be timely in submitting their reports and taking their physical fitness tests.

TRICARE Overview

Eileen Mejia, Marketing Director, Northeast Section, TRICARE, provided an overview of the managed health care program for Active duty personnel, retirees, and their families. In addition, she distributed several pamphlets regarding the TRICARE Program and discussed changes to the *2002 TRICARE Prime Remote Guideline*. Mejia provided enrollment forms for personnel in the TRICARE Northeast region and outlined eligibility requirements, enrollment procedures, and benefits. She also discussed the specifics of TRICARE Prime Remote, which addresses the needs of personnel who are in assignments that are geographically distant from traditional health care installations.

USASD Overview

CPT Pattie M. Showalter, USASD Commander, discussed her detachment's mission, organization, and capabilities. She also talked about ethics, awards (how they are processed by USASD and PERSCOM), accountability requirements, and procedures for requesting passports.

Connie Scott-Blue, USASD's primary Agency Program Coordinator, provided information on the government travel charge card, particularly, how to apply for a travel card, its benefits, cardholder responsibilities, and USASD and Bank of America points of contact. She also detailed the process for requesting and attaining authorization to travel on temporary duty.

Reporting Responsibilities

Paula Bettes, Acquisition TWI Manager in PERSCOM's AMB, outlined TWI Program procedures including responsibilities of PERSCOM, ASC, industry, USASD, and the student. She provided examples of training plans, listed required reports and timelines, and named the various TWI Program points of contact.

Conclusion

The orientation was deemed a great success by virtually all attendees. Jim Welsh thanked all participants, discussed tentative plans for next year's orientation, and said that next year he hopes to have even more industry participants. He is also considering holding the workshop in April, with *all* TWI officers returning to report their TWI experiences.

CYNTHIA D. HERMES is Managing Editor of Army AL&T magazine. She has 22 years of federal government service.

From left: ASAALT Military Deputy LTG John S. Caldwell Jr., ASC Director COL Mary Fuller, and ASAALT Claude M. Bolton Jr.

Many Challenges Cited . . .

ARMY ACQUISITION WORKSHOP FOCUSES ON SUPPORT FOR THE WARFIGHTER

Cynthia D. Hermes
Photos by Richard A. Mattox

Introduction

The annual Army Acquisition Workshop, held Aug. 5-7, 2002, in Norfolk, VA, focused predominantly on "Army Acquisition—Supporting The Warfighter." More than 260 acquisition professionals attended the workshop, which provides a forum for the senior Army acquisition leadership to communicate directly with and present new guidance to program executive officers (PEOs); project, product, and program managers (PMs); Defense Contract Management Agency (DCMA)

commanders; and other acquisition commanders (ACs).

Workshop host Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASAALT)/Army Acquisition Executive (AAE) Claude M. Bolton Jr. and COL Mary Fuller, Director of the Acquisition Support Center (ASC), welcomed attendees and provided opening remarks. Bolton said his priorities are programs, people, production, and improvement. He outlined draft policy changes related to acquisition reports and business case analyses. He then emphasized to

attendees that they are the people to achieve acquisition excellence.

ASAALT Military Deputy (MILDEP) LTG John S. Caldwell Jr. discussed the Army Acquisition Corps' (AAC's) challenges in supporting the warfighter, fielding systems-of-systems, and accomplishing Army transformation. He also outlined the goal, mission, vision, and challenges of the Army Acquisition and Technology Workforce (A&TWF) Campaign Plan. He said that the acquisition community must know how warfighters think, understand their environment and requirements, and

Guest dinner speaker GEN Gordon R. Sullivan (USA, Ret.), President, AUSA
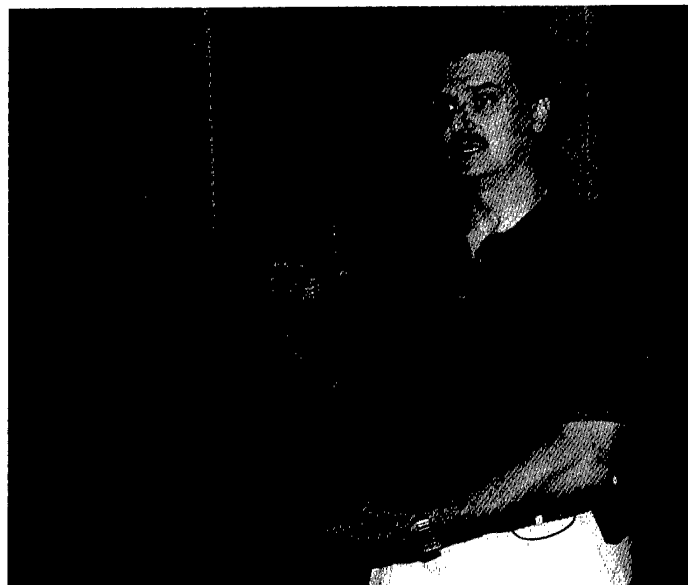
Donald L. Damstetter, Deputy Assistant Secretary for Plans, Programs and Resources
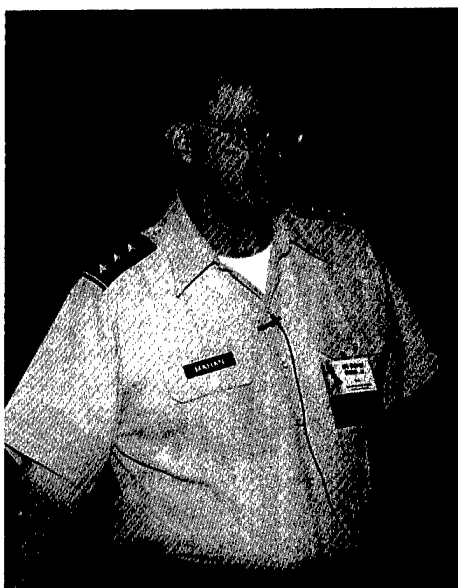
LTG Charles S. Mahan Jr., DCS, G-4

assure them that their needs are being addressed.

Perspectives

Allan M. Resnick, Assistant Deputy Chief of Staff (DCS) for Combat Developments at the U.S. Army Training and Doctrine Command (TRADOC), discussed the Concepts-Based Requirements System and its benefits, simulation support plans, Objective Force (OF) proponents, and the battle lab structure. He

stressed that improved warfighting capability is the ultimate goal of development efforts and that operational and organizational concepts bind the pieces together.

Michael C. Schexnayder, Deputy Director for Acquisitions, Objective Force Task Force (OFTF), addressed the OFTF vision and concept, transformation challenges, and the role of the OF as a joint and combined enabler. He also discussed the emerging Future Combat Systems (FCS) unit of action (UA), the FCS acquisition concept, and emerging OF technologies.

MG N. Ross Thompson III, Commander of the Tank-automotive and Armaments Command, provided a logistics transformation task force and Army Materiel Command (AMC) update. He noted that AMC is undergoing its most extensive change in 30 years and that the Army transformation must be accompanied by a logistics trans-

LTG Peter M. Cuviello, Army CIO/G-6

formation. Thompson reviewed current logistics challenges, the vision for logistics transformation, and the goal of operational flexibility and agility. He also discussed total life-cycle management, reliability and maintainability, the impact of technology decisions in determining force structure, logistics and readiness key performance parameters (KPPs), tactical logistics operations, and how the logistics transformation will benefit warfighters.

BG Edward M. Harrington, Director, DCMA, discussed how attendees could best use DCMA. In particular, he outlined how DCMA can influence program success, Stryker acquisition life-cycle support, DCMA's role in warfighter readiness, and supplier risk reviews.

W.H. (Dell) Lunceford Jr., Director, Army
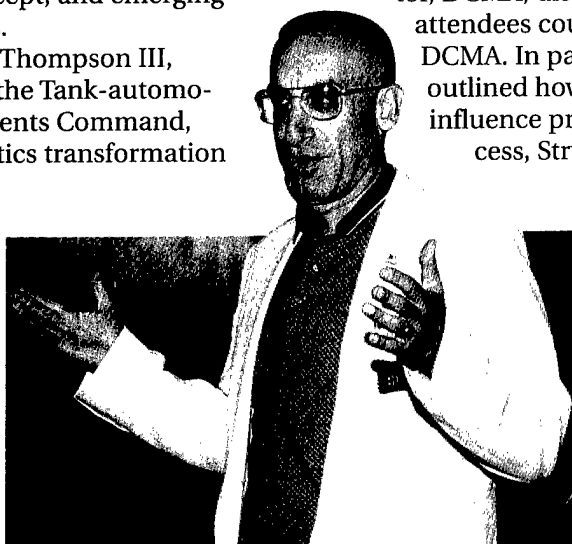
Model and Simulation Office (AMSO), concluded the first morning's agenda with a discussion of why simulation is critical to the Army's mission, how modeling and simulation support the warfighter, and Army and AMSO challenges. He also outlined the Simulation and Modeling for Acquisition, Requirements, and Training (SMART) concept; SMART and the Transformation Campaign Plan; and how SMART affects the requirements validation and approval process.

Donald L. Damstetter, Deputy Assistant Secretary for Plans, Programs and Resources, followed a working lunch that included a question and answer session between attendees and the ASAALT and his MILDEP. Damstetter provided an update on the Program Objective Memorandum (POM), recapitalization efforts, and 6.3 funding. Other topics included POM challenges, the Army "bow wave" and Extended Plan Program, unit set fielding (USF), and OF funding.

Douglas K. Wiltsie, Deputy Project Manager (DPM), OF, and DPM, Defense Advanced Research Projects Agency (DARPA), and COL Donald Kotchman, PM, Abrams, presented an overview of the FCS that included its definition and history. Wiltsie also discussed the FCS Lead Systems Integrator agreement between the U.S. Army, DARPA, and the Boeing Co. In addition, he outlined the FCS-equipped UA functions, the FCS system-of-systems architecture, and the broad industry announcement process. Kotchman also commented on the FCS evolutionary acquisition process and other programs related to FCS.

LTG Charles S. Mahan Jr., DCS, G-4, noted that the G-4 serves as the ASAALT's responsible official for sustainment. This responsibility includes managing readiness issues and ensuring that sustainment is adequately addressed during the acquisition process. Mahan outlined some key priorities, Total Life-Cycle Systems Management, the organic industrial base, Army depot chal-

MG William L. Bond, Deputy for Systems Management, OASAALT

lenges, and advantages of public-private partnerships. In conclusion, Mahan noted that the ASAALT, the AMC Commanding General (CG), and the G-4 are developing a formal process to determine whether organic or outsourced acquisitions provide corporate best value for the Army.

LTG Peter M. Cuviello, Army Chief Information Officer (CIO)/G-6, discussed Army knowledge management and the Army's strategy to transform itself into a network-centric, knowledge-based force. He outlined the CIO/G-6 and Network Enterprise Technology Command missions relative to acquisition, information management (IM), and HQDA realignment. Cuviello also addressed the Army networthiness initiative and its objectives and the goals of the Information Technology E-Commerce Commercial Contracting Center (ITEC4). In addition, he emphasized ASAALT's IM goals and stressed that everyone must have and use Army Knowledge Online e-mail addresses.

MG William L. Bond, Deputy for Systems Management, OASAALT, provided a G-8 (Force Development) update. He reviewed the Army modernization strategy, presented a summary of POM actions and priorities, and discussed the challenge of equipping the force. He also highlighted resourcing successes, unit set fielding, the munitions transformation, and future force development actions and challenges.

Allan M. Resnick, Assistant DCS for Combat Development, TRADOC

Dinner Speaker

GEN Gordon R. Sullivan (USA, Ret.), former Chief of Staff of the Army and current President of the Association of the U.S. Army (AUSA), was the formal dinner guest speaker. He applauded the acquisition community for providing equipment that allows warfighters to survive on the battlefield and return home. He also pointed out that acquisition personnel themselves are also warfighters. He concluded by stating, "The essence of the Army is the people who climb into helicopters, put rucksacks on their backs, and go to places such as Kosovo." Sullivan was followed by award presentations to honor PMs and ACs of the year as well as the presentation of the Defense Acquisition Executive Certificate of Achievement. (See related article on Pages 50-52.)

Additional Briefings

COL Kip P. Nygren, Deputy Director of AMC's Research, Development and Engineering (RD&E) Command Transformation Team, began the second day's briefings with a discussion on the perceptions and realities of RD&E. He reviewed the command's intended mission, vision, and proposed organizational structure. The command, which is still in the planning process, will be tasked with improving the integration of RD&E across the Army and the other Services. The goal will be to get technology to the soldier more quickly while taking advantage of technological opportunities.

COL R. David Ogg Jr., PM, Brigade Combat Team, discussed the Stryker Combat Team vision and the successful teaming effort between the government and General Motors/ General Dynamics Land Systems joint venture facilities.

COL Mark W. Jones, PM, Mobile Electric Power (PM, MEP), called on PEOs and PMs to address the importance of power requirements as a key part of Army transformation because tactical electric power is the centerpiece of all systems. He specifically discussed vehicle power and other future power sources. He also urged attendees to use PM, MEP for technical input regarding solicitations and power assessments.

Levator (Vate) Norsworthy Jr., Deputy General Counsel (Acquisition), Department of the Army Office of the General Counsel, provided tips on acquisition law. He suggested that attendees contact his office for actions requiring OASAALT review and to address other legal and business issues. He also suggested that his office be involved early and often to minimize bureaucracy and identify possible "speed bumps" in the acquisition process.

COL Bryon J. Young, Director of Contracting, Office of the Deputy Assistant Secretary of the Army (Procurement), and Acting Chief of Staff Army Contracting Agency (ACA), provided an overview on the ACA's vision, goals, objectives, and concept of operations. He also discussed the various ACA contracting regions, ACA's headquarters, and its organizational structure.

COL Jody A. Maxwell, PM, Common Missile (CM) Project Office, provided a briefing on the CM's mission, KPPs, acquisition objectives, and major technology efforts. He also discussed the quality function deployment (QFD) approach, which is focused on requirements development, and CM QFD relationships.

COL Patrick A. Toffler (USA, Ret.), Director of the Partnership Acquisition Systems Development Center, Department of Systems Engineering, U.S. Military Academy (USMA), pro-

Levator (Vate) Norsworthy Jr., Deputy General Counsel (Acquisition), Department of the Army Office of the General Counsel

vided a briefing on the research and studies partnership between the OASAALT and the USMA. He discussed the background, purpose, goals, and future of the partnership as well as key findings and benefits.

LTC Peggy R. Carson, Chief of the U.S. Total Army Personnel Command's (PERSCOM's) Acquisition Management Branch (AMB), provided an overview of the AMB organization and mission. She also discussed changes to the program management career track, the Command Select List process, tips for writing Officer Evaluation Reports, assignment considerations, Individual Development Plans, AAC membership, and the impact of the new Officer Personnel Management System III (OPMS III) on the AAC.

The AAE provided his closing remarks prior to a scheduled working lunch. He thanked attendees for their participation and praised the ASC staff for putting together an "outstanding" conference. He also cited the importance of technology and the need to educate customers. He closed by stating that the Army's

COL David R. Ogg Jr., PM, Brigade Combat Team

COL Patrick A. Toffler (USA, Ret.), Director of the Partnership Acquisition Systems Development Center, Department of Systems Engineering, USMA

transformation is real, comprehensive, and challenging.

Following an open question-and-answer forum, COL Fuller provided an overview of the new ASC organization, outlining the ASC's mission, functions, organizational structure, initiatives, and programs. She also discussed the status of a state of the AAC brief being prepared for the Army Chief of Staff, the A&TWF Campaign Plan, enablers for success, critical acquisition position waivers, the Army Acquisition Qualification Course, intermediate level education, and the Competitive Development Group Program. Fuller also promoted upcoming events such as the PM workshops to generate interest among civilian personnel to compete for PM positions. Details were also provided on ASC's move to Fort Belvoir, VA, and the AAC Ball. Final topics of discussion included an update on a Post Utilization Taskforce and the revised continuous learning policy.

COL David Danley, PM, Chemical Biological Medical Systems, discussed the evolution of medical bio-

logical defense (BD) efforts, the Food and Drug Administration (FDA) review process for vaccine development and licensing, controlling risks by integrating the FDA regulation process with the DOD acquisition process, and the BD vaccine process transformation effort.

COL Robert L. Reyenga, PM, Training Devices, discussed the Multiple Integrated Laser Engagement System, simulation of weapons effects, deployment to the Maneuver Combat Training Center (MCTC), MCTC force-on-force exercises, common training instrumentation architecture, and constructive and virtual simulations.

John R. Wallace, Strategic Planner, Office of the Deputy Assistant Secretary of the Army (Defense Exports and Cooperation) (ODASA (DE&C)), provided a briefing on international security cooperation in support of the ODASA (DE&C). Topics of discussion included the realignment of Army security cooperative efforts, foreign military sales, and Army export policies.

Yvonne Thomas Jackson, Acting Director for Acquisition Policy, ODASA (Policy and Procurement), discussed the streamlined DoD-5000 series documents, including DoD Directive 5000.1, DoD Instruction 5000.2, and DoD 5000.2R (which will be canceled and rewritten as a guidebook), and Army Regulation (AR) 70-1 and DA Pam 70-3.

COL Ronald D. Flom, Commandant, Defense Acquisition University (DAU), discussed the school's reorganization, mission, core functions, transformation initiatives, and challenges. He also addressed DAU's strategic partnerships with academic institutions and industry.

Closing Remarks

MG Bond remarked in closing that the workshop was highly informative and called on all attendees to leverage what they learned.

CYNTHIA D. HERMES is Managing Editor of Army AL&T magazine. She has more than 22 years of federal government service.

Outstanding Achievements Cited . . .

PMs, ACQUISITION COMMANDERS, CECOM TEAM RECEIVE AWARDS

Heather J. Kohler and Cindy Stark
Photos by Richard A. Mattox

Introduction

The Army's Project Manager of the Year Award, Product Manager of the Year Award, two Acquisition Commander (AC) of the Year Awards, and the Defense Acquisition Executive (DAE) Certificate of Achievement were presented Aug. 6, 2002, at the annual Army Acquisition Workshop in Norfolk, VA. Assisting COL Mary Fuller, Director, Acquisition Support Center (ASC), in the presentation of the awards were Claude M. Bolton Jr., Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASAALT), and ASAALT Military Deputy (MILDEP) LTG John S. Caldwell Jr.

Project Manager Of The Year

COL James C. Naudain, Project Manager, Precision Fires Rocket and Missile Systems (PM, PFRMS), received the Project Manager of the Year Award for FY01. He was cited for expertly managing this critical, large, and extremely complex program and for exceeding program objectives by undertaking a major reorganization and transformation of this project.

The PM, PFRMS is responsible for 3 of the Army's 12 acquisition category (ACAT) 1D programs, 2 multi-Service programs with the U.S. Marine Corps and the U.S. Navy, 3 multinational co-production programs, and 1 multina-

tional development program. Additionally, the PM serves as the Program Coordinator for the Multiple Launch Rocket System (MLRS) international Memorandum of Understanding partnership with France, Germany, Italy, and the United Kingdom. This effort is the Army model for international acquisition programs. During the next 10 years, these programs will total $9 billion in development and procurement funding.

Naudain supervises 15 military individuals (including 5 command select list product managers), 252 civilians, and numerous support contractor personnel. During the restructure of

Shown on the left and right in each photo are ASAALT Claude M. Bolton Jr. and ASAALT MILDEP John S. Caldwell Jr.

COL James C. Naudain, PM, PFRMS, accepts the Project Manager Of The Year Award.

LTC William Stevenson, PM, Prophet and DTSP, accepts the Product Manager Of The Year Award.

COL Robert Mark Brown, Commander, DCMA-Baltimore, receives an Acquisition Commander Of The Year Award.

LTC David W. Coker, Commander, U.S. Army Dugway Proving Ground West Desert Test Center, receives an Acquisition Commander Of The Year Award.

the MLRS and Army Tactical Missiles-Brilliant Anti-Armor Submunition Technology Project Offices into the PFRMS Project Office, he managed the efficient distribution of funds to minimize the overall financial impact on both the United States and its international partners. This reorganization effort also involved development of a new organizational structure, revised mission functions, and significant relocation of personnel. Not only did Naudain keep the morale and welfare of the involved personnel at the forefront, he increased organizational efficiency within the new structure.

While undertaking this major transformation, the PM, PFRMS Project Office successfully conducted the M270A1 operational test and appears to have exceeded the requirements in all categories. The M270A1 is now being fielded. Concurrently, the High Mobility Artillery Rocket System and Guided MLRS entered the qualification test phase and are on track to support FY05 fielding. Army TACMS Block IA, Quick Reaction Unitary, and Block II are on schedule for production and fielding. Additionally, Naudain developed the materiel strategic plan for rocket and missile artillery to meet the transformation requirements for the Objective Force.

In accepting his award, Naudain said he was humbled because there are numerous other individuals who routinely face the same challenges he does and they were also deserving of the

award. He also credited his five "great" product managers for their contributions, adding that a successful PM office must embrace a combat mentality that emphasizes mission, unity, teamwork, urgency, and innovation.

Product Manager Of The Year

LTC William Stevenson, Product Manager, Prophet (PM, Prophet) and Division Tactical Unmanned Aerial Vehicle Signals Intelligence (SIGINT) Payload (DTSP), received the Product Manager of the Year Award for FY01. The PM, Prophet Office manages multiple products (Prophet Blocks I through V and DTSP) and numerous subsystems. Stevenson led and managed a team of more than 250 civilians, military staff, and contractors.

Under Stevenson's leadership, PM, Prophet successfully passed a Milestone C Decision Review for Block I full-rate production and fielded Prophet systems to the Brigade Combat Team and other users at least 2 years ahead of schedule. This is the first fielding of a new Ground SIGINT capability for the Army in more than 15 years. It will enable the Army to withdraw numerous legacy assets and save more than $100 million in support costs during the next 10 years while significantly improving overall intelligence capabilities needed for the war on terrorism.

Stevenson is also cited for leading the efforts that resulted in the award of contracts for the DTSP Component

Advanced Development, providing enhanced capabilities to warfighters. Simultaneously, he led risk-reduction efforts for both Prophet Block Upgrades and the DTSP Program that included development of two risk-reduction test beds, a modeling and simulation infrastructure, three unmanned aerial vehicle demonstration payloads, and a foreign comparative testing effort. This testing could potentially save the Army $50 million while reducing development time 3-5 years. Stevenson has created and fostered a vision for the future of tactical electronic warfare that incorporates the use of complex advanced technologies.

Stephenson, whose wife, son, and dad shared the event with him, thanked the PEO leadership for allowing him to command and stated that it's a hoot!

ACs Of The Year

COL Robert Mark Brown and LTC David W. Coker were each recipients of an Acquisition Commander of the Year Award for FY01.

Brown was recognized for his outstanding achievements as Commander, Defense Contract Management Agency (DCMA)-Baltimore. DCMA-Baltimore has the highest workload and is the most complex field command within DCMA, with contracts valued at more that $62 billion and involving more than 2,100 Defense contractors. This Contract Management Office (CMO)

Stanley R. Tylecki, Program Officer, accepts the DAE Certificate of Achievement on behalf of CECOM's R2CSR Team.
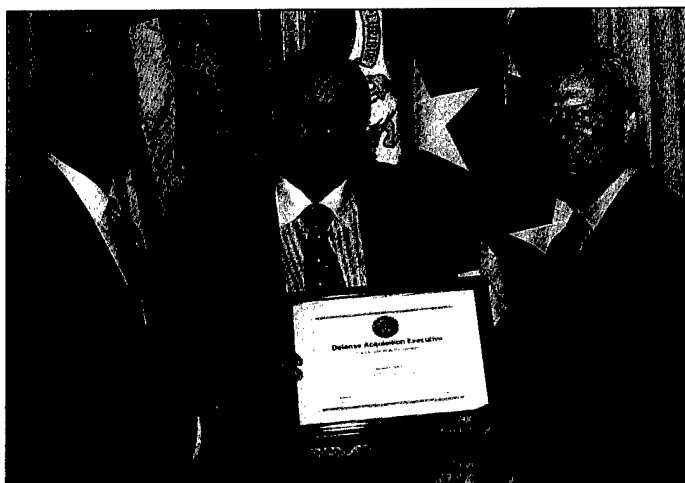
provides program support to more than 34 prime and support contracts including "Top 200" Defense contractors.

To address a wide range of acquisition reform initiatives such as the Single Process Initiative, Earned Value Management, Electronic Commerce, and Supplier Risk Reduction across a major segment of the industrial base, Brown and DCMA-Baltimore established 30 management councils with major area contractors, key PMs, and buying-command customers. The councils met regularly to address issues of high-risk to improve DOD contract financial management and reduce unmatched disbursement. As a result, customers saved more than $114 million in expiring funds during FY01, which exceeded the agency goal. The CMO met its budget targets and closed out contracts with the highest efficiency in DCMA, while simultaneously reducing agency costs by closing, consolidating, and moving facilities.

In accepting his award, Brown noted that, "no man is an island, and that is particularly true in winning this award." He specifically credited the outstanding support he received from senior leaders and others who allowed him to do the things he felt necessary. He also thanked the professionals at DCMA-Baltimore for their support.

Coker was recognized for his contributions as the Commander, U.S. Army Dugway Proving Ground West Desert Test Center, Dugway, UT, where he leads a military, DA civilian, and contractor workforce of more than 400 scientists, engineers, and analysts who perform more than 150 major tests per year. He is responsible for the execution of an annual budget that exceeds $50 million and the operation of complex test facilities and ranges spread across 800,000 acres.

Specifically, the test center is the Nation's premier "center of excellence" for testing chemical and biological (CB) defense systems; smoke, obscurants, and illumination systems; and meteorological and environmental technologies. In addition, the center develops associated modeling and simulation capabilities. Coker's acquisition knowledge and leadership abilities enabled him to simultaneously manage CB laboratory and chamber tests using actual CB agents, outdoor field trials using CB simulants, artillery and mortar ammunition tests, and CB defense collective training activities in support of the National Guard and Active component units.

Coker was cited for his unwavering commitment to ensuring that the ultimate customers (soldiers, sailors, airmen, and Marines) received only top-quality products. He initiated actions to make the West Desert Test Center the first Army Test and Evaluation Command organization to achieve ISO 9001 accreditation. Coker's efforts have made Dugway Proving Ground's West Desert Test Center the "tester of choice" for any CB defense equipment or CB operational issue.

Coker, whose parents, sister, and brother-in-law attended the ceremony, noted that receiving the award was a very humbling experience. He praised the Desert Test Center leadership for providing an excellent command environment and thanked his outstanding staff for their efforts in transforming business initiatives and providing quality support to customers.

DAE Certificate Of Achievement

The DAE Certificate of Achievement recognizes organizations, groups, and teams for exceptional contributions in reducing life-cycle costs and/or improving DOD's acquisition systems and programs.

The U.S. Army Communications-Electronics Command's (CECOM's) Rapid Response to Critical Systems Requirement (R2CSR) Team was chosen for the DAE certificate for providing DOD systems managers with an efficient and effective means of acquiring critical, near-obsolete items, thus sustaining crucial weapons systems, mitigating system downtime, and serving the immediate needs of warfighters and peacekeepers.

Program Officer Stanley R. Tylecki, who accepted the award on behalf of the R2CSR Team, said it was a distinct privilege to represent CECOM's senior management, individual team members, industrial partners—and most important—the project managers involved with the program to support the warfighter.

HEATHER J. KOHLER, an employee of Science Applications International Corp. (SAIC), provides contract support to the ASC. She has a master's degree in public administration from George Mason University and a bachelor's degree in political science from the University of Connecticut, Storrs, CT.

CINDY STARK, an SAIC employee, provides contract support to the ASC. She has a B.A. in international studies from George Mason University and is working toward an M.S. in organizational learning from George Mason University, School of Public Policy.

FROM THE DIRECTOR ACQUISITION SUPPORT CENTER

The Acquisition Support Center (ASC) continues to provide the best professional development opportunities to ensure the Army has a well-trained, well-educated, and highly capable acquisition, technology, and logistics workforce. Among the benefits of being a member of the workforce is the ability to take advantage of numerous educational, training, and experience opportunities. Be sure to read the article on Page 43 on the Army Acquisition Corps (AAC) Training With Industry (TWI) Orientation Workshop held this past July in Springfield, VA. The TWI Program affords training opportunities in an industry environment where commercial best practices are closely observed. Another article I want to direct your attention to is on the ASC Resource Management Workshop, which is on Page 60 of this issue of *Army AL&T*. Workshop presentations endorsed the crucial role that the acquisition community plays in support of our warfighters.

I recently had the pleasure of attending the 2002 Army Acquisition Workshop, "Army Acquisition-Supporting the Warfighter," in Norfolk, VA. In addition to having superb briefings and informative displays, the workshop served as the vehicle for presentation of the prestigious Program, Product, Project Manager (PM), and Acquisition Commander of the Year Awards. In fact, I had the opportunity to personally congratulate the recipients on their outstanding achievements. (See article on these awards on Page 50 of this magazine.) These individuals and their organizations are to be applauded for their outstanding accomplishments. The competition was tough. Unfortunately, we can't recognize all the runners-up, but I can tell you we are proud of the great work all our AAC professionals continue to do.

On behalf of the entire ASC workforce, I want to extend a well-deserved congratulations and welcome back to ASC Deputy Director Craig Spisak who recently completed the Industrial College of the Armed Forces. I would also like to take this opportunity to recognize both LTC Cris Boyd and Kevin Maisel who provided outstanding support as Acting ASC Deputies during Craig's absence.

Please mark your calendars for the annual AAC Ball that will be held on Sunday, Oct. 20, 2002, at the Holiday Inn in Alexandria, VA. Evening festivities will feature a special tribute to the American soldier and to the acquisition community that so aptly supports the soldier. An online reservation tool is available on the AAC home page. Tickets are limited, so make your reservations early! For additional information, contact Mary McHale at **mchalem@saalt.mil**.

I would also like to invite you to visit the AAC display at the annual Association of the United States Army meeting Oct. 21-23, 2002, at the Marriott Wardman Park Hotel in Washington, DC. The meeting will be especially meaningful this year following the events of September 11, 2001. Finally,

as I have noted on several occasions, the key element of our mission remains people: the people who are a part of this organization and the people we serve—the acquisition professionals—and ultimately the soldiers in the field.

COL Mary Fuller
Director
Acquisition Support Center

AAC Flag Authorized

The Army Acquisition Corps (AAC) flag authorization letter was signed by LTG John S. Caldwell Jr., Director of the AAC, on Aug. 12, 2002. All acquisition commands will receive a hard copy via official mail. Additionally, the letter can be viewed on the AAC Web site at **http://dacm.rdaisa.army.mil**.

Ask The Acquisition Support Center

I've just discovered that my current position is in the Acquisition and Technology Workforce (A&TWF). Now that I am an A&TWF member, what should I do?

As a member of the A&TWF, you should be aware that there are certification requirements for each identified position. You should immediately determine which acquisition career field your position is coded for and at what level you must become certified. This information is available on the Career Acquisition Personnel & Position Management Information System (CAPPMIS) Web site at https://rda.rdaisa.army.mil/cappmis/.

This Web site is the portal for all A&TWF members to find their personal Acquisition Career Record Brief (ACRB) and Individual Development Plan (IDP). As a member of the A&TWF, you are required to maintain your ACRB and IDP.

The first time you enter this Web site, you will create your own password and user identification. Click on New User to get started, and follow prompts. Once in the system, you should view your ACRB. On the ACRB in the upper left in "SECTION I – CURRENT POSITION DATA," under "CATEGORY," you will find the name of the acquisition career field for which your position is coded. Just below that, under "AAC CERT LEVEL REQ," you will find the certification level required for your position.

Once you discover your position's career field and certification level, go to the Defense Acquisition University Web site at http://www.dau.mil. Under "Resources," you will find an online catalog for the current fiscal year with information about training for A&TWF members and an important checklist of the certification requirements (Appendix B) for each acquisition career field at each level.

Another source of information on A&TWF membership is the Army Acquisition Corps Web site at http://dacm.rdaisa.army.mil/. This Web site is designed for every A&TWF member and will inform you of all the education, training, and experience opportunities you might be eligible to pursue. In addition, you will find a list of Acquisition Career Managers (ACMs) and Career Management Support Specialists (CMSSs) by geographical region who are dedicated to serving A&TWF members.

FY03 White House Fellows Program

The President's Commission on White House Fellows annually selects exceptionally promising individuals to serve as White House fellows. The White House Fellows Program is an opportunity for soldiers to receive unique training and firsthand experience in the process of governing the Nation. Fellows write speeches, help review and draft proposed legislation, answer congressional inquiries, chair meetings, conduct briefings, and otherwise assist high-level government officials. In the past, fellows have worked for the Vice President, the White House Chief of Staff, and the National Security Council.

Candidates for the White House Fellows Program progress through a highly competitive process. Applicants are expected to have a record of achievement in their careers, the skills necessary to serve at the highest levels of government, and above-average leadership potential. To be eligible for the program, officers must meet the following criteria:

- Be a U.S. citizen;
- Have no more than 19 years Active federal commissioned service as of September 2003;
- Be available for a 2-year utilization tour following the fellowship;
- Be branch qualified at current rank;
- Have no pending adverse actions;
- Meet height and weight standards per Army Regulation 600-9, *The Army Weight Program*;
- Have a graduate degree;
- Have no Army educational requirements system utilization obligation at start of the fellowship;
- Have potential for future military service; and
- Be competing solely for the White House Fellows Program and no other Army-sponsored program, fellowship, or scholarship.

The U.S. Total Army Personnel Command's (PERSCOM's) Acquisition Management Branch (AMB) will conduct a review board in December 2002 to select Acquisition Corps officers for nomination to the program. The first step for interested Acquisition Corps officers is to submit a DA Form 4187, *Personnel Action*, requesting consideration for the program. The DA Form 4187 must include your mailing address, your e-mail address, and your work telephone number; and the statement "I request permission to compete for the White House Fellows Program." In addition, the form must be approved and signed by the applicant's field grade supervisor and forwarded to PERSCOM, ATTN: TAPC-OPB-E (Paula Bettes), 200 Stovall Street, Alexandria, VA 22332-0411. The suspense date for submitting applications is Dec. 6, 2002. Officers are encouraged to review and update their official military personnel file (on microfiche) prior to submitting their application. Applicants should also verify with their assignment officer that all college transcripts and a current photo are on file at AMB.

PERSCOM Headquarters will forward Army officer nominations to the White House Commission prior to Feb. 1, 2003. Regional finalists will be selected in March, followed by the selection of national finalists in May. The White House Commission is scheduled to announce the names of selected fellows in June 2003. Once selected, the fellows will relocate to the Washington, DC, area to start the program. The fellowship year runs from September 2003 to August 2004. This is followed by a 2-year utilization assignment that will begin in September 2004.

Officers incur an Active duty Service obligation (ADSO) for a period of three times the length of the fellowship. The ADSO begins the day after the fellowship is completed.

Additional information is available online at **http://www.whitehousefellows.gov/home.html**.

Any questions or comments regarding this article should be directed to Paula Bettes at DSN 221-2760 or (703) 325-2760.

Acquisition Graduate Degree Program

Twenty-three U.S. Army Acquisition Corps (AAC) and two international officers received acquisition-related M.A. degrees at a commencement ceremony earlier this year at Fort Leavenworth, KS. Webster University conferred the degrees as part of the Acquisition Graduate Degree Program (AGDP). American officers receiving M.A. degrees in procurement and acquisitions management were MAJ Scott Alexander, MAJ Willie Coleman, MAJ John Conway, MAJ John Courtney, MAJ Gregory Franks, MAJ Gordon Graham, MAJ Moises Gutierrez, MAJ Timothy Hossack, MAJ Lafonda Jernigan, MAJ Rodney Mentzer, MAJ Michael Newell, MAJ Ray Pickering, MAJ Ed Stawowczyk, MAJ Rod Williams, and MAJ William Wygal. MAJ Denis Carrier from Canada also received an M.A. degree in procurement and acquisitions management. U.S. officers receiving M.A. degrees in computer resources and information management were MAJ Michael Bush, MAJ Jeffrey Flint, MAJ William Geesey, MAJ Velma Gordon, MAJ Victor Harper, MAJ Jon Rickey, MAJ Kenneth Robertson, and MAJ Charles Walls. MAJ(P) Tim Sanders from Australia also received an M.A. degree in computer resources and information management. Daniel F. Viele, Chair of the Business Department, Webster University School of Business and Technology, gave the commencement address.

AGDP is a fully funded program that permits selected AAC students to complete an acquisition-related advanced degree while attending the resident Command and General Staff Officer Course (CGSOC). Webster University is the AGDP provider and maintains a site at Fort Leavenworth. AAC officers selected for the resident CGSOC and interested in the AGDP should contact the Chief, Acquisition Education and Training Program, U.S. Army Command and General Staff College, Fort Leavenworth at (913) 684-5330/5329 or DSN 552-5330/5329.

Zybura Receives M.M.A.S.

MAJ Martin A. Zybura received a master of military art and science (M.M.A.S.) degree during the resident Command and General Staff Officer Course (CGSOC) graduation ceremony earlier this year at Fort Leavenworth, KS. Of the 74 CGSOC graduates, Zybura was the only Acquisition Corps officer conferred with the M.M.A.S.

In addition to completing the resident CGSOC curriculum, M.M.A.S. candidates must enroll in three research methods courses, prepare and defend a master's thesis, and pass a comprehensive oral examination covering the entire CGSOC curriculum. Zybura's thesis was titled *Contractor Support: Will the Army's Continued Reliance on Contractors Negatively Impact Future Military Operations?*

Zybura's next assignment is Chief of Contracting, Osan Air Force Base, Republic of Korea.

2002 AUSA Meeting, AAC Ball Update

The 2002 Association of the United States Army (AUSA) Annual Meeting will be held at the Marriott Wardman Park and Omni Shoreham Hotels in Washington, DC, Oct. 21-23, 2002. The theme of this year's meeting is "Realizing the Army Vision." The 3-day meeting will feature events such as the Army Ten-Miler road race, military and family forums, and numerous military and industry exhibits.

A special highlight on the weekend will be the annual Army Acquisition Corps (AAC) Ball. The ball will be held at the Holiday Inn in historic Old Town Alexandria, VA, on Sunday, Oct. 20, 2002. Tickets for this gala event are limited, so visit the AAC home page at **http://dacm.rdaisa.army.mil** for the latest information, or contact Mary McHale at **mary.mchale@saalt.army.mil** to reserve your table.

Smith Receives Hite Award

MAJ James H. Smith received the LTG Ronald V. Hite Award at a ceremony held earlier this year at Fort Leavenworth, KS. The award, established in March 1999, recognizes the outstanding Army Acquisition Corps (AAC) student attending the regular Command and General Staff Officer Course (CGSOC). COL Steven Boshears, the U.S. Army Training and Doctrine Command's Principle Assistant Responsible for Contracting, presented the award. Smith received an individual plaque, a three-star AAC coin, and a congratulatory note from LTG John S. Caldwell Jr., Director of the AAC. Additionally, Smith's name was placed on a plaque that is permanently displayed at the U.S. Army Command and General Staff College.

Smith was selected from 60 AAC students attending the 2001-2002 CGSOC. All AAC officers attending the regular CGSOC are eligible for the award. Selection is based on a student's grade point average, contribution to group work, leadership skills, written and oral communications, research ability, recommendation from the student's academic counselor or evaluator, and consensus of the acquisition faculty. The award is named in honor of the former AAC Director who was instrumental in establishing the Acquisition Education and Training Program (AETP) at the U.S. Army Command and General Staff College.

The AETP provides instruction in a distinct Acquisition Corps area of concentration within CGSOC and a fully funded master of arts degree-producing Acquisition Graduate Degree Program offered in conjunction with the CGSOC.

PERSCOM Notes . . .

FY03 COL/GS-15 PM/AC Slate

The U.S. Total Army Personnel Command recently released the FY03 colonel (COL)/GS-15 project manager (PM)/acquisition command (AC) slate. Unless otherwise indicated, all of the personnel listed below are lieutenant colonel promotable unless otherwise noted.

NAME	SLATE/COMMAND
Barber, Jesse L.	Alternative Technology Programs
Bell, Anthony B.	3rd Army Contracting
Bliss, Gary L.	Defense Contract Management Agency–Huntsville
Cantor, Michael E.	Comanche
Coker, David W.	Logistics Automation
Coppola, Alfred A.	Intelligence and Effects and Fires Command and Control System
Diego-Allard, Victoria	Contracting Command-Europe
Driessnack, Charles H.	Theater High Altitude Area Defense
Fritz, Gregory J.	Software Engineering Center-Meade
Golden, Robert (CIV)	Tactical Radio Communications Systems
Green, Allen L. III	Software Engineering Center-Belvoir
Greene, Harold J.	Ground Combat Command and Control
Hodge, Yolanda (CIV)	Tactical Operations Center/Air and Missile Defense Command and Control System
Hogan, Thomas H. (COL)	Enterprise
Lyford, Mark A.	Medical Systems
Maddux, Jonathan A.	Future Combat Systems- System Development and Demonstration
McDaniels, Lloyd E.	Kinetic Energy Missile
McQuain, Paul M.	Defense Contract Management Agency–Dallas
Nichols, Camille M.	Combat Mobility System
Patterson, William N.	Defense Contract Management Agency–Baltimore
Payne, Jerome F.	Electronic Proving Ground-Yuma
Pecoraro, Joseph E.	Chemical Stockpile Disposal
Polczynski, Kennith D.	Joint Services
Rust Stephen L.	Instrumentation, Targets, and Threat Simulations
Smith, Michael J.	Soldier Lethality
Stone, Jesse M.	Defense Contract Management Agency–Atlanta

FY03 LTC/GS-14 PM/AC Slate

The U.S. Total Army Personnel Command's Acquisition Management Branch recently released the following FY03 lieutenant colonel (LTC)/GS-14 product manager (PM)/acquisition command (AC) slate.

NAME	SLATE/COMMAND
Akins, Elton LTC	Theater High Altitude Area Defense Ballistic Missile/Command, Control, Communications and Intelligence
Arn, Mark LTC	Theater High Altitude Area Defense Launcher
Bailey, Calvin LTC	Defense Message System
Blackwell, Bobby MAJ(P)	All Source Analysis System
Borhauer, Rachel LTC	Towed Artillery Digitization
Boyd, Cris LTC	Communication Management Systems
Bristow, Steven LTC*	
Bullington, Johnny LTC	Common Software
Campbell, Scott MAJ(P)	Defense Contract Management Agency– Stewart and Stevenson
Cavalier, Michael LTC	Longbow Apache
Chandler, Michael LTC	Theater Targets Program Office
Chapman, James LTC	Fire Support
Clarke, Matthew LTC	Objective Individual Combat Weapon
Colvin, Darryl MAJ(P)	High Mobility Artillery Rocket System
Conklin, Daryl LTC	Defense Contract Management Agency– Lockheed-Martin
Contreras, Andres LTC	Multiple Launch Rocket System Launcher
Daugherty, Anne LTC	Kwajalein Test Range
Deluca, Ralph LTC	Army Airborne Command and Control
Dietrich, Shane MAJ(P)	Materiel Test Center-Yuma
Dobb, David Mr.	Medium Tactical Vehicle
Drake, Steven MAJ(P)	Aerial Common Sensor
Espaillat, Francisco MAJ	Petroleum and Water Systems
Flynn, Karl Scott LTC	Mobile Gun System
Gabbert, Jeffrey MAJ(P)	Extended Range Multipurpose Unmanned Aerial Vehicle
Grebe, Joseph LTC	Combat Service Support Control System
Harvey, Christopher LTC	Common Ground Station/Data Link
Herbert, Linda LTC*	
Hodge, Tony LTC	Army Tactical Missile System–Block II
Holzman, Simon LTC	Defense Communication Systems-Europe
Horrocks, Brent LTC	Fire Control Radar
Iddins, Jeffrey LTC	Exoatmospheric Kill Vehicle
King, Dion LTC	Interim Armored Vehicle
Lee, Stephen Jr. LTC	Precision Guided Munitions
Long, John III LTC*	
Loper, Thomas II LTC	Communications and Intelligence Support System
Mabry, Mark LTC	Prophet
McKsymick, Eric LTC	Advanced Towed Acquisition System
McRae, Lawrence LTC	Air Warrior
Mockenstrum, Jeffrey MAJ(P)	Theater High Altitude Area Defense Radar
Modrow, Harold III LTC	Joint Vaccine Acquisition Program
Norris, James LTC	Defense Contract Management Agency–Dallas
O'Donell, Warren MAJ(P)*	
Olson, Tom LTC	Joint Computer Acquisition and Logistics
Openshaw, Shane MAJ(P)	Modernized Target Acquisition Designation Sight/Pilot Night Vision Sensor
Ostrowski, Paul LTC	Counter-proliferation
Oxford, John LTC**	Preplanned Product Improvement Brilliant Anti-Armor Submunition Technology
Packard, Charles LTC	Aviation Technical Test Center
Peach, Quentin LTC	Ground Based Radar-Prototype
Potts, Anthony MAJ(P)	Apache Modernization
Ramsey, Andrew LTC	Product Improvement/Future Systems
Rombough, Douglas LTC	Special Program Office 2100
Rosso, Daniel LTC	Defense Contract Management Agency–Israel
Ruiz, Gabriel LTC	Defense Data Networks
Schvaneveldt, Kent LTC**	Defense Contract Management Agency–Syracuse
Shirley, Randall LTC	Multi-channel Satellite Terminal
Silas, Lawrence LTC	Force Sustainment System
Simpson, James LTC	Defense Contract Management Agency–Manassas
Smith, Bobby LTC	Business Enterprise
Smith, Perry LTC	Live Training Systems
Steves, Michael MAJ(P)	Medium Extended Air Defense System
Stewart, Gregory LTC	Technology Applications Product Office
Surdu, John LTC	One Semi-automated Forces
Taneyhill, Dorothy LTC	Fixed Wing Aircraft
Thurgood, Neil MAJ(P)	Improved Cargo Helicopter
Tobin, Vincent LTC	Electro Optical Sensor System
Wendel, John MAJ(P)	Man-portable Satellite System

* Unslated principal
**Reslate from FY02

FY02 LTC Promotion Board Results

Results of the FY02 Lieutenant Colonel (LTC) Promotion Board were released in July 2002. This was the first LTC Promotion board under the new Officer Personnel Management System (OPMS) XXI. The selection rate for Army Acquisition Corps (AAC) officers in the primary zone was 72.3 percent, while the selection rate for the Army competitive category was 74.8 percent. Selection rates among the four career fields were as follows:

	Primary Zone	Above Zone	Below Zone
Operations	77.3%	10.9%	5.7%
Operational Support (AAC/Foreign Area Officers)	71.9%	11.4%	5.2%
Information Operations	64.5%	21.3%	3.9%
Institutional Support	69.6%	15.3%	4.2%
Total Army Competitive Category	74.8%	12.1%	5.3%

Overall AAC Results

The FY02 LTC Promotion Board reviewed the files of 101 AAC officers in the primary zone and selected 73 AAC officers. Additionally, 14 AAC officers (11.8 percent)

were selected from above the zone, and 6 AAC officers (5.2 percent) were selected from below the zone.

Promotion Trends

A review of the files of those officers selected for promotion by the board revealed the following trends.

Command And Staff College (CSC)

Eighty-four percent of the AAC officers selected in the primary zone attended resident CSC. Sixty-nine percent of the AAC officers selected in the primary zone completed CSC through nonresident studies. Ten officers in the primary zone did not complete CSC (either resident or nonresident), and none of these officers were selected for promotion.

Command

Company command evaluation reports were important to the board. The majority of AAC officers selected for promotion had at least one above-center-of-mass (ACOM) Officer Evaluation Report (OER) as company commanders. These reports generally had either clear ACOM senior rater profiles and/or strong, exclusive senior rater comments on potential.

Consistent COM(+) Performance/Job Progression

Another important trend was consistent COM(+) performance throughout the officer's career. AAC officers selected for promotion generally had consistent COM(+)/ACOM OERs. Additionally, officers who were favorably considered had provided clear evidence of increased responsibility from one assignment to the next as well as diversity in acquisition assignments.

The New OER (DA Form 67-9)

Analysis clearly showed that the board placed significant emphasis on the new OER. The average number of new OERs for officers considered in the primary zone was 3.6. Officers selected for promotion from the primary zone had an average of 2.2 ACOM OERs. This substantiates the position that a COM report is not a "career ender." However, there is a notable difference between a single COM report and a COM file. Officers considered for promotion who did not have any ACOM DA Form 67-9 OERs were not selected for promotion.

Bottom Line

The board took into consideration the "whole-person" concept that includes performance, qualifications (positions held, schools attended, etc.), and Army needs (AAC requirements). However, a COM(+) file,

consisting of strong COM reports coupled with ACOM reports, seemed to be critical for selection. Congratulations to the following AAC officers selected for promotion to LTC. (Note: Four names were not available at the time this article went to press.)

Any questions or comments regarding this article should be directed to Paula Bettes at DSN 221-2760 or (703) 325-2760.

*Ballew, Mark	*Marion, Robert
Barraclough, Brett	Markovich, John
Belin, Deloise	Mason, Patrick
Bovais, Jeffrey	Mason, William
Busch, Steven	McCloud, Darold
Bushey, Douglas	McManus, Gilbert
Card, Dennis	Meyer, David
Carrick, Kenneth	Miller, Patrick
Chinowsky, Lary	Morris, Jeffrey
*Cole, William	Moses, Terry
Conroy, Steven	Pacello, Francis
Cooper, Stephen	Parker, Michael
Crosman, Lloyd	Payne, Thomas
Cummings, Steven	*Riggins, David
*Daniels, Debra	Rodgers, Kenneth
Day, James	Roetzler, Carol
Dingle, Gwendolyn	Ryan, Michael
Eger, Andrew	Sacks, John
Evaro, Victore	Sanders, William
Flanigan, Michael	Scalsky, David
Fouse, Scott	Schaefer, Terry
Gage, Gerrie	Schafer, Joseph
Gollsneider, Brian	Schleder-Kirkpatrick, Lisa
Gonzalez, Gregory	Schoenig, Philip
Goulette, Dana	Shoop, Brian
Hancock, Kimberly	Simmons, Bennie
Hester, James	Simon, Carl
Hinds, John	Sload, Peter
Hitz, Stephen	Smith, James
Hogan, Melvin	Smith, Todd
Hoskin, Michael	Souder, Jeffrey
Housewright, Richard	Steinbugl, Louis
*Howell, John	Switzer, Michael
Hudson, Jerome	Tolson, Todd
Hummel, Michael	Trulock, Troy
Jacobs, Ronald	Turner, John
Johnson, David	Van Gorden, Douglas
Johnson, Gregory	Viersen, Phillip
Jones, Walter	Wood, Kelvin
Jost, Wade	Young, Reed
Kilgallon, John	Zarbo, Michael
Kokoskie, Gregory	Zavarelli, John
Kremer, Brent	Zoppa, Robert
Lazar, John	
Leaphart, John	* Below the zone selection.
Lewis, Stanley	

U.S. Total Army Personnel Command
Acquisition Management Branch
E-Mail/Telephone Numbers

Chief, AMB	3131
LTC Peggy Carson	Peggy.Carson

COL Assignments	3090
LTC James Simpson	James.Simpson

Distribution Manager	9383
CPT Fred Hollis	Fred.Hollis

LTC YG 74-82 Assignments	3124
MAJ Phil Viersen	Phillip.Viersen

LTC YG 83-86 Assignments	3129
MAJ Edward Lane	Edward.Lane

MAJ YG 82-90 (A-K)	2800
MAJ Jeffrey Bochonok	Jeffrey.Bochonok

MAJ YG 82-90 (L-Z)	5479
MAJ Jeannette Jones	Jeannette.Jones

MAJ/CPT YG 91-95 (A-K)	3128
MAJ Keith Harvey	Keith.Harvey

MAJ/CPT YG 91-95 (L-Z)	1474
MAJ Tonie Jackson	Tonie.Jackson

Certification Manager	3130
Ms. Veronica Gonzalez	Veronica.Gonzalez

ACM-National Capital Region

Ms. Giselle Whitfield	9690
	Giselle.Whitfield

Ms. Chandra Evans-Mitchell	4267
	Chandra.Evans-Mitchell

ACM-Northeast & Central Regions

Vacant	6137

Ms. Gloria King	3190
	Gloria.King

ACM-Southern & Western Regions

Mr. Ken Winters	3215
	Kenneth.Winters

Mr. Roosevelt Ingram	3222
	Roosevelt.Ingram

Advanced Civil Schooling/Training With Industry/Fellowships

Fellowships	2760
Ms. Paula Bettes	Paula.Bettes

As of 15 July 2002

Boards/Schools Manager	3127
Mr. Rick Yager	Richard.Yager

Pers Mgt Spec/Boards	2764
Ms. Cathy Johnston	Catheryn.Johnston

Pers Mgt Spec/CPAC	2762
Vacant	

Pers Mgt Spec/ Civ Distribution	2768
Mr. Steven Zamperini	Steven.Zamperini

Military Technician	2758
Mr. Tom Tabor	Thomas.Tabor

Military Technician	9354
Mr. Tony Staton	Tony.Staton

Personnel Assistant	2767
Ms. Rosalyn Ford	Rosalyn.Ford

Personnel Assistant	2771
Vacant	

Management Assistant	3094
Vacant	

AMB FAX	(703) 325-9001/7816	AMB E-Mail:	(USERID)@hoffman.army.mil
DSN	221-XXXX	PERSCOM Web Page:	https://www.perscomonline.army.mil
CML	(703) 325-XXXX	AAC Web Page:	dacm.rdaisa.army.mil
AMB Web Page:	https://www.perscomonline.army.mil/OPfam51/ambmain.htm		

Commander
U.S. Total Army Personnel Command
ATTN: TAPC-OPB-E
200 Stovall Street
Alexandria, VA 22332-0411

23 Graduate From MAM Course

On May 23, 2002, 23 students graduated from the Materiel Acquisition Management (MAM) Course, Class 02-003, at the Army Logistics Management College, Fort Lee, VA. One international officer from the Philippine Army and two international officers from the Greek Navy were among the graduates.

The Distinguished Graduate Award was presented to CPT Tim Warner. CPT Christopher Brown, MAJ Harry Culclasure, CPT Scott Hamann, and CPT Carl Hollister were Honor Graduates, and CDR Christos Eleftheriadis received the Commandant's List Award.

The 7-week MAM Course provides a broad perspective of the materiel acquisition process and includes a discussion of national policies and objectives that shape the process and the U.S. Army's implementation of the policies and objectives. Areas of coverage include acquisition concepts and policies, research and development (R&D), test and evaluation, financial and cost management, acquisition logistics, force integration, production management, risk assessment, and contract management. Emphasis is on developing midlevel professionals to effectively participate in managing the acquisition process. Graduates are awarded equivalency with two Defense Acquisition University courses, ACQ 101 and ACQ 201.

R&D, program management, testing, contracting, requirements generation, logistics, and production management are some of the materiel acquisition work assignments offered to MAM Course graduates.

The names of the graduates follow.

Name	Rank
Agustin, Gene	CPT
Aleandre, Rodrigue	CPT
Armenta, Lewis	CPT
Brown, Christopher	CPT
Conatser, James	CPT
Culclasure, Harry	MAJ
Eleftheriadis, Christos	CDR
Grimes, Rudolph	CPT
Hamann, Scott	CPT
Hollister, Carl	CPT
Iglesias-Cruz, Gregorio	CPT
King, Federica	CPT
Kordellos, Haralambos	LCDR
Limuaco, Luis	MAJ
Moon, Jasper	CIV
Neumann, Joseph	CPT
Perkins, Russell	CPT
Roberson, Rochelle	CPT
Rouse, Robert	MAJ
Sherrill, Tommie	CPT
St. Clair, Thane	CPT
Warner, Tim	CPT
Williamson, John	MAJ

Final MAM Course Offering

On Aug. 23, 2002, after 17 years of continuous class offerings, the venerable Materiel Acquisition Management (MAM) Course was discontinued. It will be replaced by the Army Acquisition Qualification Course (AAQC), which is currently under development.

Faculty at the Army Logistics Management College (ALMC) developed the MAM Course in 1985 to provide entry-level training to Army officers and selected civilians entering the acquisition workforce. MAM replaced the Army's Project Manager Development Course, which was offered by ALMC from 1977 until 1985.

During these early years, the Defense Systems Management College offered its 20-week graduate-level Program Management Course, while the Army and Air Force taught their own entry-level acquisition courses.

Although the Defense Acquisition University was established during the 1990s and began offering entry-level acquisition training, the Army elected to retain its MAM Course. The rationale was that MAM provided Army-unique training and offered more in-depth, integrated coverage for selected functional areas. The MAM Course was also equivalent to ACQ 101 and ACQ 201.

Thousands of Army officers and many civilians and allied students have attended this challenging course. MAM graduates have enjoyed successful acquisition careers, and some of these graduates have migrated to the Defense industry for a second career.

ALMC is establishing a satellite campus in Huntsville, AL, with AAQC as its flagship course. The AAQC faculty is being based in Huntsville because it will be close to a large population of Army acquisition workforce personnel. AAQC will be offered in residence at Huntsville and at other onsite locations.

In addition to continuing to provide equivalencies to ACQ 101 and ACQ 201, AAQC will also provide equivalencies to CON 101, CON 104, LOG 101, IRM 101, and TST 101. The first AAQC offering is scheduled for January 2003.

Joe R. East Jr., MAM/AAQC Course Director, has been chosen to head the ALMC-Huntsville Campus. He has 26 years of teaching experience.

PERSONNEL

Damstetter Named DASA For Plans, Programs And Resources

Effective July 28, 2002, Donald Damstetter was named as the Deputy Assistant Secretary of the Army (DASA) for Plans, Programs and Resources. With more than 23 years of active federal service, Damstetter had served for the past 21 months as the Acting DASA for Plans, Programs and Resources.

His previous assignments also include Deputy Director for Plans, Programs and Resources under the DASA (Plans, Programs and Policy); Business Manager for the Program Executive Office, Intelligence, Electronic Warfare, and Sensors; Business Manager for the Project Manager, Electronic Warfare/Reconnaissance Surveillance and Target Acquisition; and Financial Manager for the Satellite Communications Agency.

Damstetter has a bachelor of science in business management from the University of Buffalo and a master of business from Rutgers University. He also graduated from the Industrial College of the Armed Forces with a master's degree in national resources strategy, completed the Advanced Program Manager's Course at the Defense Systems Management College, and is Level III certified in both program management and business, cost estimating and financial management. In addition, Damstetter is a recipient of the Civilian Superior Service Medal and numerous exceptional performance awards.

ASC Welcomes
2 New Proponency Officers

The Acquisition Support Center (ASC) extends a welcome to new staff members MAJ John Lemondes and MAJ Marko Nikituk. Lemondes took over as the Functional Area (FA) 51A Proponency Officer. He joins the ASC following acquisition assignments as the Military Integration Officer for the Advanced Concepts and Technology II Program in the Army Research Office-Washington and most recently as a Joint Detection Project Officer and the Assistant Project Manager of the Biological Integrated Detection System (BIDS) for the Joint Program Office for Biological Defense (recently reorganized as the Program Executive Office (PEO), Chemical and Biological Defense). He holds an M.B.A. and an M.A. in public administration from Syracuse University and a B.S. from Penn State University. He is Level I certified in contracting, Level II certified in both program management and information technology, and is pursuing Level II certification in test and evaluation. His military education includes the Chemical Officer Basic Course, the Quartermaster Officer Advanced Course, and the Command and General Staff College. He can be reached at **john.lemondes@saalt.army.mil** or (703) 604-7136 or DSN 664-7136.

MAJ Marko Nikituk has assumed duties as the FA 51R Proponency Officer. His previous acquisition assignments include Assistant Product Manager for Army Human Resource Systems (AHRS) for PEO, Enterprise Information Systems, and Executive Officer for the Director, Enterprise Integration in the Army Chief Information Office (G-6). He holds an M.S. in information technology management from the Naval Postgraduate School and a B.S. in electronic engineering from the U.S. Military Academy. He is Level III certified in both program management and information technology. His military education includes the Infantry Officer Basic and Advanced Courses, the Field Artillery Officer Advanced Course, and the Command and General Staff Officer's Course. He can be reached at **marko.nikituk@saalt.army.mil** or (703) 604-7114 or DSN 664-7114.

Resource Management
Workshop Held

The Acquisition Support Center's (ASC's) Resource Management (RM) Division hosted its annual Resource Management Workshop June 25-26, 2002, in Springfield, VA. Attendees included representatives from each program executive office (PEO); project, product, and program management office (PMO), the U.S. Army Research, Development and Acquisition Information Systems Activity; and the Office of the Assistant Secretary of the Army for Acquisition, Logistics and Technology.

In her opening remarks, ASC Director COL Mary Fuller reminded workshop participants that the Army and the acquisition community are being reorganized and realigned as part of the Army's transformation effort. Fuller shared the

Donald Damstetter, Deputy Assistant Secretary for Plans, Programs and Resources, awards the inaugural Resource Manager of the Year Award to Donald MacVittie of PEO, Soldier.

ASC's new vision and cited the crucial role that the acquisition community plays in support of our warfighters.

Presentations were made on such topics as reorganization; the planning, programming, budgeting, and execution system (PPBES); the Business Initiative Council; and P-18s/Army Working Capital Funds.

This year, ASC presented its inaugural Resource Manager of the Year Award to recognize the outstanding contributions of an individual within the acquisition resource management career field, to include manpower and financial resources. The ASC RM Division is pleased to announce that Donald MacVittie of PEO, Soldier was awarded the FY02 Resource Manager of the Year Award. Congratulations Don! MacVittie as well as other workshop participants are pictured in the accompanying photographs.

ASC Director COL Mary Fuller presents opening remarks.

Contracting Efforts Termed Crucial For Warfighters' Success

The success and effectiveness of 21st century warfighters will depend immensely on transforming and/or reducing the logistics tail. One of the key resources to achieve this is contracting, which is an integral part of the U.S. Armed Forces support structure. Contracting efforts are also being used to help the Army realize its vision of mobilizing and deploying Brigade Combat Teams within 96 hours, and developing faster, lighter, and more lethal forces. Effective contracting support and acquisition planning, however, require continuous and proactive command involvement and intensive education and training opportunities.

The Army's special staff component for contracting issues is the Principal Assistant Responsible For Contracting (PARC). PARCs and the command's warfighting staff sections, i.e., G-1 thru G-4, must work closely together to train and understand contracting processes and how they can be used to meet their mission requirements. PARCs and commanders within the Army contracting command structure, who support warfighting commands, are responsible for developing and revising contracting support plans that meet requirements of the warfighter operational plans (OPLANS) incorporated in logistics annexes.

Typical tasks in the contract planning process include the following: planning for various contingency operations; articulating contracting procedures, authority, and deviations; lending contract support to units; ensuring units understand and conduct site surveys, exercises, and pre-deployment training; ensuring contracting, resource management, and finance support are included in contingency OPLANs; conducting market surveys to identify available commercial supplies, services, and equipment in the mission area; advising commanders and logistics planners how contingency contracting can best support and accomplish their mission; explaining to those commands that every area of responsibility has a PARC who oversees and is responsible for all contracting issues within the theater of operation; and expeditiously contracting the workload and resolving complex contracting issues.

Army contracting personnel will continue to support and train field-ordering officers. In addition, Army contracting personnel will assist in overseeing the Government Purchase Card Program, purchasing/request commitment processing, and unauthorized commitments.

Another force multiplier on the battlefield is the contractor. DOD contractors are a critical link between the Army Service component commanders and the warfight-ing and logistics systems they support. Documentation is being developed to identify required contractors and enter information on them in the Time-Phased Force Deployment Data (TPFDD). TPFDD is the resource used by Army commands to indicate which units are deployed from CONUS or OCONUS to the theater of operation. Policies are also being developed to support contractors on the battlefield and implement their support within the warfighter command structures, i.e., monitor, manage, deploy, protect, and provide logistical support to the contractors on the battlefield. The proposed doctrine will require contractors to develop and provide support plans that tie directly to the command's operational plans/logistics annexes. This support plan will ensure that contractors receive the necessary life support to fulfill their missions while remaining transparent to the warfighter.

The preceding article was written by SGM Ethan Jones, U.S. Army Contracting Command, Europe.

ACQUISITION EXCELLENCE

Life-Cycle Contractor Support For Javelin

The Javelin Anti-Tank Missile System, managed by the Close Combat Missile Systems Project Office at Redstone Arsenal, AL, continues its strong record of commercial practices with the recent decision by the Army Acquisition Executive (AAE) to implement life-cycle contractor support (LCCS) for the program. The Javelin replaces the Dragon weapon system and is a man-portable, fire-and-forget, shoulder-fired, anti-tank weapon system capable of defeating all known and future tank threats to a range of 2.5 kilometers. Javelin is also capable of defeating light-armored vehicles and hovering helicopters, and destroying bunkers and buildings. The system consists of a command launch unit (CLU) that contains a day/night sight, launch electronics, and missile software; a modular missile that requires no maintenance; and training devices built mostly from commercial off-the-shelf equipment.

The Javelin system is the product of a joint venture between Raytheon and Lockheed Martin and was built to a performance specification. Early in the process, Army logistics planners recognized the need for interim contractor support (ICS) until the system design was stabilized. In 1996, ICS for the CLU and training devices began and has yielded a Javelin operational readiness rate of 99 percent and an operations and support (O&S) cost savings of 60 percent over the Dragon system. Javelin was awarded the Army O&S Cost Savings Award

in 1997, one of the main factors in Javelin's Project Manager being named the 1998 "PM of the Year."

The success of the ICS Program in supporting Javelin hardware and reducing O&S costs led Army planners to consider Javelin as a candidate for continued contractor support under an LCCS concept. An Army Cost and Economic Analysis Center analysis validated and approved a comparison between contractor and organic support costs, resulting in the AAE's decision on March 13, 2002, to permit the Javelin Program to implement LCCS.

Javelin LCCS will begin in July 2003. The LCCS concept will build on the success of the ICS program by including performance-based incentives. A 5-year firm fixed price LCCS contract will be awarded for a set number of maintenance actions. This will motivate the contractor to modify hardware to increase system reliability. Contractor initiatives to institute best commercial practices, technology insertion, or modernization through spares will improve system reliability and reduce maintenance actions. The LCCS initiative is a true win-win, best-value opportunity for all the key players in the Javelin Program.

For additional information, contact Monti Jaggers at (703) 681-7571 or **monteze.jaggers@saalt.army.mil.**

Byte Wars: The Impact of September 11 on Information Technology

By Edward Yourdon
Prentice Hall PTR, 2002

Reviewed by Scott Curthoys, a Counterintelligence Analyst contracted to a federal law enforcement agency and retired Army military intelligence and foreign area officer.

One of the many memories that I have of September 11th is of a radio announcer saying, "Everything has changed; our world will never be the same." While most of us do not see significant alterations in our daily lives, Edward Yourdon, in his newest book *Byte Wars: The Impact of September 11 on Information Technology*, focuses on the significant changes in the information technology (IT) field. Yourdon not only discusses changes *in* the IT field, but he proposes numerous necessary changes *to* the IT field. The difference one finds upon reading *Byte Wars: The Impact of September 11 on Information Technology* is not as subtle as it first seems.

The events of September 11th demonstrated to Americans that they were vulnerable targets not just in distant foreign locations such as U.S. embassies or military ships and facilities, but here at home. Much of this vulnerability stems from our dependence on ubiquitous interconnected information systems. The attack on the World Trade Center not only destroyed two buildings but also disrupted numerous computer systems supporting banking and finance, telecommunications, emergency response, and government operations. Those systems that provide us with our daily societal infrastructure are also vulnerable. Information systems are key components of water and electricity distribution systems, air and rail transport, commercial transactions, right down to the 911 system that brings life-saving help. A serious disruption in one area of the nation's critical infrastructure could cascade into other areas. Yourdon shares the view of many when he asserts that the attack of September 11th was not a "singular" event and that more attacks will occur. The current decade, he asserts, will be known as the "decade of security." It will challenge those who design, administer, or manage IT systems to think the unthinkable and identify and manage risks that they have never considered.

The strength of this book lies in Yourdon's attempt to make it relevant to the various layers and segments of the IT field that include the programmer, the project manager, and senior corporate executives as well as the middle manager. By dividing his chapters into sections such as techniques and technologies, paradigm shifts, and strategic implications, Yourdon clearly articulates the changes that must be embraced by IT professionals to mitigate the threat to American commerce and the national infrastructure.

The protection of the data within an IT system is now greater than the physical protection of that system's hardware. This is not as simple as protecting the data from hackers and other unwanted guests. This represents the reversal of a decade-long trend toward open, accessible data. The wealth of data on many corporate or government Web sites, including military sites, represents a real operations security concern. Information that has been viewed as benign or even necessary for corporate image may, in fact, provide a terrorist or criminal with a key piece of information. Moreover, the emergence of ever-smaller, ever-smarter devices (personal digital assistants, removable micro drives, and wireless connections) makes the physical interdiction of data removal almost impossible. IT systems are no longer appendages of the accounting department or inventory control. These systems now represent the brains that direct and control the operations of the company, agency, or organization. As such, they now require more thorough security. Yourdon's message is not to spend more money on security, but to make a priority of doing it better.

Events that disrupt our IT systems as well as our daily lives, which were once thought of as occurring only "once every 100 years," now seem to happen with dizzying regularity. In addition, the causes of these disruptions are not just accidental, but increasingly the result of malevolent design. To deal with these serious events, such as the attacks of September 11th, Yourdon advocates the development of two types of systems. Resilient systems are those that can withstand sudden, disruptive attacks without collapsing. They have slack or extra capacity built into critical parts that allow the IT system to "give" with the blow. Today's financially straitened times make emergent systems of particular interest to the commercial world, even more so to the military. These are ad-hoc, grassroots systems that cope with unanticipated and fast-moving disruptions that stymie traditional top-down systems. This is similar to the ageless military philosophy of "adapt and overcome." Yourdon's application of these characteristics to the seemingly rigid IT world does represent a change both in and to the industry.

Except for his chapters on good-enough systems and death-march projects, which seem non sequiturs to his principal theme of the impact from September 11th, Yourdon's book clearly points out the changes in the IT field as well as the changes to it resulting from the attack on the United States. Because IT systems will be at the heart of the U.S. response to terrorism, it is vital for all of us in the field of information technology or security to understand the forces at work on our critical systems.

SBCCOM's Weeks Sekowski Receives TOYA Award

Dr. Jennifer Weeks Sekowski of the U.S. Army Soldier and Biological Chemical Command (SBCCOM) was named one of this year's Ten Outstanding Young Americans (TOYA). The U.S. Junior Chamber presented the awards at a ceremony earlier this year in Sioux Falls, SD. Begun in 1938, the annual TOYA Awards Program recognizes young people who are the best, brightest, and most inspirational leaders in America.

Weeks Sekowski began her professional career as a graduate student in molecular and cell biology at the University of Maryland. Her work focused on the carcinogenic potential of various metals, with particular emphasis on their ability to interfere with the normal processes of gene repair. Having completed this study, Weeks Sekowski turned her attention to the problem of breast cancer and was awarded the first Army Pre-Doctoral Fellowship for Breast Cancer Research in 1994.

Weeks Sekowski's groundbreaking research focused on DNA replication and the specific types of mutations that occur during that replication when cancer is present. Her work resulted in a U.S. patent and four peer-reviewed scientific articles, and is important in helping find a cure for breast cancer.

Refining her research, she discovered that DNA may be capable of carrying out repair within the DNA synthetic process and that alterations in those repair proteins may be contributing to replication activity found in cancer cells.

SBCCOM's mission is biological and chemical defense, counterterrorism, and homeland defense. Weeks Sekowski's work at SBCCOM focuses on answering questions about the health effects of very low levels of toxicants, thus paving the way to develop early medical intervention and diagnostic tools for biological and chemical toxins.

CECOM Team Wins Award

Earlier this year, a team from the Army Materiel Command's Communications-Electronics Command received a 2001 Honorary Defense Standardization Program (DSP) Achievement Award for its work on an Army radio system. The award recognizes acquisition excellence that results in an important contribution to DOD objectives.

During a DSP ceremony, Principal Assistant Deputy Under Secretary of Defense for Logistics and Materiel Readiness Allen Beckett presented the award to the Army AN/PRC-112 Production Support Team, which developed the midterm strategy for upgrading and extending the life of the AN/PRC-112 radio. The radio, part of the aircrew life-support equipment used by the three Services and a number of allied countries, is the only protected go-to-war survival radio.

The team set the midterm strategy for upgrading and extending the life of the AN/PRC-112 radio until the Combat Survivor Evader Locator System is fielded. The team used performance-based contracting and key Defense standardization-based initiatives to ensure that soldiers in the field will have an upgraded radio with the latest technology at the lowest possible cost.

The team reduced DOD's acquisition cost of the product by more than 50 percent, resulting in phase one savings of more than $20 million. Simultaneously, the team achieved the right balance of reliability, maintainability, and supportability, resulting in an ultrareliable product.

JBPDS IPT Receives David Packard Award

Edward C. "Pete" Aldridge, Under Secretary of Defense for Acquisition, Technology and Logistics, has selected the 2002 Army winner of the David Packard Excellence in Acquisition Award for calendar year 2001 achievements. The Joint Biological Point Detection System Integrated Product Team (JBPDS IPT) for the Program Executive Office for Chemical and Biological Defense (CBD) is the recipient of this prestigious award. Aldridge presented the award during a special ceremony at the Pentagon earlier this year. The team was nominated by COL(P) Stephen V. Reeves, Program Executive Officer, CBD.

The David Packard Award is the highest DOD acquisition award. It recognizes teams that have made highly significant contributions that demonstrate exemplary innovation and best-acquisition practices. The JBPDS IPT is responsible for providing fully automatic and rapid biological agent detection, identification, warning, and sample isolation. In October 2001, the Deputy Secretary of Defense directed deployment to key installations and, within 4 weeks, the JBPDS was reconfigured and deployed for urban surveillance. It has proven effective operating 24 hours a day, 7 days a week, with more than 99 percent operational availability.

ARMY AL&T WRITER'S GUIDELINES
http://dacm.rdaisa.army.mil/

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Harvey L. Bleicher, Editor-in-Chief	bleicheh@aaesa.belvoir.army.mil	(703)805-1035/DSN 655-1035
Debbie Fischer-Belous, Executive Editor	fischerd@aaesa.belvoir.army.mil	(703)805-1038/DSN 655-1038
Cynthia Hermes, Managing Editor	hermesc@aaesa.belvoir.army.mil	(703)805-1034/DSN 655-1034
Sandra R. Marks, Contract Support	markss@aaesa.belvoir.army.mil	(703)805-1007/DSN 655-1007
Joe Stribling, Contract Support	striblinga@aaesa.belvoir.army.mil	(703)805-1036/DSN 655-1036
		Datafax: (703)805-4218/DSN 655-4218

Purpose
To instruct members of the AL&T community about relevant processes, procedures, techniques, and management philosophy and to disseminate other information pertinent to the professional development of the Army Acquisition and Technology Workforce (A&TWF).

Subject Matter
Subjects may include, but are not restricted to, professional development of the Army's A&TWF, AL&T program accomplishments, technology developments, policy guidance, and acquisition excellence. Acronyms used in manuscripts, photos, illustrations, and captions must be kept to a minimum and must be defined on first reference. **Articles submitted to *Army AL&T* will not be accepted if they have been scheduled for publication in other magazines.**

Length of Articles
Articles should be approximately 8 double-spaced typed pages, using a 20-line page, and must not exceed 1,600 words. **Articles exceeding 1,600 words will not be accepted.** Do not submit articles in a layout format or articles containing footnotes, endnotes, or acknowledgement lists of individuals.

Photos and Illustrations
A maximum of 3 photos or illustrations, or a combination of both, may accompany each article **in a separate file** from the manuscript. Please ensure that artwork is accessible for editing and not embedded in the manuscript. Photos may be black and white or color. **Illustrations must be black and white and must not contain any shading, screens, or tints. All electronic files of photos must have a resolution of at least 300 dpi (JPEG or TIFF). If they do not meet this requirement, glossy prints of all photos must be submitted via U.S. mail, Fedex, etc.** Photos and illustrations will not be returned unless requested.

Biographical Sketch
Include a short biographical sketch of the author/s that includes educational background and current position.

Clearance
All articles must be cleared by the author's security/OPSEC office and public affairs office prior to submission. The cover letter accompanying the article must state that these clearances have been obtained and that the article has command approval for open publication.
Individuals submitting articles that report Army cost savings must be prepared to provide detailed documentation upon request that verifies the cost savings and their reinvestment. Organizations should be prepared to defend these monies if higher headquarters has a higher priority for them. All articles are cleared by the Acquisition Support Center.

Submission Dates

Issue	Author's Deadline
January-February	15 October
March-April	15 December
May-June	15 February
July-August	15 April
September-October	15 June
November-December	15 August

Submission Procedures
Article manuscripts (in MS Word) and illustrations/photos (300 dpi JPEG or TIFF) may be submitted via e-mail to **bleicheh@aaesa. belvoir.army.mil**, or via U.S. mail to the address in the first paragraph at the top of this page. All submissions must include the author's mailing address; office phone number (DSN and commercial); and a typed, self-adhesive return address label.